

May 2007

Climate Change – The Edge of a New Frontier

Climate change has suddenly become sexy. With Kyoto protocol being the hottest topic the C-word is what everyone is talking about. Whether you name it carbon dioxide, carbon trading, carbon credit or carbon footprint gas has become gold. Billions of dollars are changing hands to buy and sell carbon credits. CO2 is the hottest commodity being traded today. Brokers and traders and consultants are mushrooming everyday.

Chicago Climate Exchange is the world's first carbon exchange transacting over 3 million tonnes of CO2 every month. It has launched a futures and options market in carbon and sulphur and owns European Climate Exchange, world's biggest climate exchange where trading volumes achieved a record of over 3 million metric tones a day in March this year.

China , India and Brazil are major players in the emissions market. For each tonne of carbon dioxide saved, the UN body on climate change gives a certificate called Certified Emissions Reductions(CER). The certificate becomes a tradable instrument and can be sold to any entity that wishes to offset its carbon emissions. This is what is known as Clean Development Mechanism (CDM). Indian enterprises have already committed investments to generate more than 379 million tonnes of CERs. Worldwide investments aim to generate 2 billion tonnes of CERs by 2012. The main worry is what will happen when the treaty expires in 2012. This has lent uncertainties about carbon trading.

All is not hunky dory with carbon trading. A recent investigation by UK's Financial Times revealed large scale manipulations under the smoke screen of carbon trading and complete lack of audit and verification.

The study has found that while a large number of companies and individuals are rushing to go green spending millions on carbon credits projects, these have resulted in little environmental benefit. Some organisations are paying for emission reductions that do not take place at all . Carbon credit or carbon neutralisation industry is making a bomb from good intentioned companies and the green gold rush sparked by the Kyoto Protocol under the belief that offsetting their own energy use by buying carbon credits can reduce the impact of climate change. Their findings showed:

- i. Instances of people and organisations buying worthless credits that do not yield any reductions in carbon emissions.
- ii. Industrial companies profiting from doing very little or from gaining carbon credits on the basis of efficiency gains from which they have already benefited substantially.
- iii. Brokers providing services of questionable or no value. A shortage of verification making it difficult for buyers to assess the credits true value.
- iv. Companies and individuals being charged over the odds for the private purchase of the European union carbon permits that have plummeted in value because they do not result in emissions cuts.

HSBC, the UK's largest bank that went carbon neutral in 2005, said they found "serious credibility concerns" in offsetting market after evaluating for several months. They urged the government to launch investigation into the system by the police, the fraud squad and trading standards and went on to invent their own scheme thus adding to the existing muddle.

Some companies like DuPont are asking green consumers to pay them for the mess they themselves have created. DuPont asks consumers to pay them \$4 a ton to eliminate carbon dioxide from its plant in Kentucky that produces a potential green house gas HFC23. Companies have set up carbon offsetters without any idea as to how the markets operate. Blue Source, a US offsetting company invites consumers to offset carbon emissions by investing in enhanced oil recovery which pumps CO₂ into depleted oil wells to bring up the remaining oil. This process was profitable in itself because of the high price of the oil. Operators were making extra revenue from selling "carbon credits" for burying the carbon.

Climate change poses a classic spill over problem. It is not the individuals but the society at large that suffers the full burden of producing emissions. To offset governments can either create markets for carbon by using tradable permits or impose carbon tax. So far, the preferred method has been tradable permits.

But this is now causing problems as markets are not perfect and susceptible to manipulations by the greedy quick rich gangs. We need smart market designs to overcome problems of tradable permits. Besides, carbon markets fix the amount of carbon reduced, not the price. "Excessive volatility or unduly high prices of quotas on carbon emissions might disrupt the economy severely. Taxes create needed certainty about prices while markets and emission quotas create unnecessary certainty about short term quantity of emissions", says the Financial Times in its editorial of 26 April 2007. Both carbon tax and markets put undue burden on the poor. FT argues that taxes are a better option to set the price of CO₂ provided governments can counter the regressive carbon taxes by lowering the levy on labour.

Goldman Sachs, the investment giant says their research indicates that the impact of NGO pressure or SRI funds or single pollution incidences on shareholder value is much less than government regulation. Self-regulation here does not work. They strongly advocate government regulation to create long term value for greenhouse gas emissions reduction and new technologies.

The business opportunity inherent in climate change is not confined to trading in carbon. Goldman Sachs says, "Money is already flowing to alternative energy sources ... markets have to be enhanced to significantly increase these flows globally and reduce our reliance on fossil fuels".

In November 2005 Goldman Sachs surprised the financial world by announcing an ambitious environmental policy framework. The slew of green measures included commitments to consider environmental and social impacts of investment, encourage the development of markets and reduce investment bank overall climate footprint. On 21 January this year it quietly released its year-end environmental report demonstrating how its environmental commitments were in line with Goldman's raison d'etre: making money. On the occasion, Sonal Shah, its Vice President Corporate Citizenship, said "We want to show that there is a way to make money on this". The message is valuing environment can create wealth.

Climate Change is big money. According to Sir Nicholas Stern, former Chief Economist of the World Bank, head of the UK Government Economic Service and the author of Stern Review – Economics of Climate Change, cost of not taking action and allowing unabated climate change could amount to 5% of GDP which could be a staggering figure of \$650bn.

As such investors are deciding that successful stock-picking is about more than whether a company meets its quarterly profit target. AXA, the French Insurance Company has become the latest socially responsible investor. It has signed up Enhanced Analytic Initiative (EAI) to reward brokers that publish research on extra-financial issues such as climate change and brand management. The Initiative controls assets in excess of \$2.4 trillion. Another initiative called UN Principles for Responsible Investment has come \$5 trillion worth of assets with members ranging from ABP, the Dutch Pension Fund to Sumitomo Trust of Japan.

Joachim Faber, Allianz AG board member responsible for asset management, says “As an investor, we are concerned to know whether the companies we are investing in are adequately taking account of climate-related risks. However, the data is often not available, sometimes not comparable or of poor quality. As a part of the Carbon Disclosure Project, we hope to collect more reliable data, so eventually, a common emissions measurement methodology can be developed.”

Companies such as Marks & Spencer have already taken the bull by the horn and put climate change, zero waste and sustainability on top of their business agenda and invested £200 million to go green. BP has attempted to restyle itself with its Beyond Petroleum label. Toyota has made substantial investment in hybrid cars; and Tesco plans to ‘carbon label’ its products, to show how much carbon dioxide is emitted during their production, transport and consumption. Richard Branson, chairman of Virgin group claims to have made huge investments to reduce emissions of Virgin airlines by 30%.

Back home ITC Chairman Yogi Deveshwar in his keynote address at the Global Conference on Social Responsibility in Vilamoura (Portugal) in February 2007 claimed “It is matter of pride that ITC became carbon positive during the year on the back of several energy conservation measures, usage of carbon neutral fuels and carbon sequestration through large scale agro-forestry programmes ITC is making rapid strides towards attaining zero waste status”. Tata Steel has also done pioneering work in this.

It is easy to understand the trigger of such investments when one realises that a group representing institutional investors controlling \$41 trillion worth of funds are monitoring companies worldwide on the level of their carbon emissions. The group known as Carbon Disclosure Project and launched on 4 December 2000 at 10 Downing Street has recently sent an information request to 2400 world’s large corporations asking them to report on their emissions.

CDP is the world’s largest investor coalition comprising 284 institutional investors. That includes ABN Amro Bank, California Public Employees Retirement System, CIBS, Deutsche Bank, Development Bank of Japan, Goldman Sachs, HSBC Holdings plc, Morgan Stanley, Old Mutual plc, Rabobank, UBS Global Asset Management, Warburg-Henderson and Zurich Cantonal Bank. It is funded by Esmee Fairbairn Foundation, The Nathan Cummings Foundation, Bridge House Trust, Polden Puckhan Charitable Foundation. UK’s Department of Environment, Food and Rural Affairs, Oak Foundation, The Marmot Charitable Trust and WWF-UK.

Reliance Industries, ICICI Bank, NTPC, Ranbaxy, Infosys are all part of the 2400 companies that have received a questionnaire seeking disclosure on:

- (i) regulatory risk/opportunity(eg limits on emissions)
- (ii) physical risk opportunity (eg changes in weather patterns impacting operations)
- (iii) consumer sentiment risk/opportunity (eg reputation)
- (iv) total company wide global greenhouse gas emissions
- (v) steps taken to manage/reduce emissions.

Clearly business is appearing to move faster than the governments in responding to this monumental threat to the survival of business. Al Gore’s persuasive film “An Inconvenient Truth”, The Stern Review and the startling report of IPCC together with daily reminders of impending disaster have finally had their effect in raising the public psyche and business awareness of this global crisis of unprecedented proportion. The reality is coming home that if we continue to waste resources and generate green house gases, we will sink without a trace. Yet, the actions are not matching the gravity. It is the insurance industry and that too in US that is getting its act together. Post-Hurricane Katrina, a report on the insurance industry, commissioned by a national coalition of institutional investors and environmental organisations has found that insurers, government and consumers are all at great risk of rising cost from severe and sudden weather related

disasters. Actuaries would simply go bust setting off a domino effect that would adversely impact the business right across the world.

The scenario in India is much worse than it looks. The inequity of climate change is writ large everywhere. The only glacier that feeds our seven rivers first be flooding India's coast for the next 40 years and then will dry up completely. So our grandchildren will have no fresh water and face severe drought conditions within half a life time. Yet, the action we are taking is nothing more than making a few movies and engaging in symbolic acts. It is an irony that while the world has been polluted by the rich industrialised north, the real sufferers of climate change will be the poor of the east and inhabitants of African continent.

The developing countries are being criticised today for being unmindful of environmental damage caused by the high growth economies like India, China & Brazil. Whilst there can be no mercy for any kind of environmental pollution north have to realise that developing countries have a right to grow and that it is only fair that north meets the costs of South's growth at least upto a take off stage. In fact it was this moral compulsion that brought the concept of carbon credits. But over the years the price of these carbon credits has reduced so much that they have lost their shine.

There are already 25 million climate refugees displaced by climate-induced disasters such as those in Papua New Guinean Carteret Islands. They have been forced to relocate because of the rising ocean level. Bangladesh is one of the most vulnerable countries in the world. 259 km of river delta islands near the Bay of Bengal have vanished in the last 30 years. The strategy, therefore, to deal with climate change is going to be different for poor countries. While carbon tax, financial incentives and increased insurance premia can force people to go green in developed countries, the grim poverty of Asia and Africa calls for an integrated action plan where the north implements the polluter-pays-principles and provides scientific and technological know-how as well as infrastructural support and transfer of technology to the south to bring it to a level playing field.

The saving grace of poverty is that the environmental footprint of the poor is a fraction of their rich counterparts. Creating wealth through unbridled consumerism and proliferation of products that create unneeded wants can be disastrous for the ecology. India's ecological footprint i.e. the natural material used per person per year is one twelfth of US and Europe.

If the rapid rate at which the developing economies are growing translates itself into consumerism, our mission of the bridging the gap is going to result in an ecological catastrophe. We therefore need to change our growth model and move our economy from acquisitional mode to experiential mode. We have to find ways to dematerialise products and opt for minimalist designs. India will thus have an even more legitimate right to demand from the north credits for saving environment & CO₂ by adopting a dematerialised, low carbon, experiential model of growth.

Just as it is real that climate has changed due to human activity, humans have the power and technology to reverse the damage. For this to happen business has to be brought to the forefront of the climate change agenda. Never before in human history has the gap between an impending catastrophe and an infinite opportunity been smaller. Hence our focus has to be on galvanising businesses for a robust response to climate change in a way that opens new vistas of growth and development advancing human happiness.

The 8th Environment Conference in Palampur brought to the fore an eleven point plan called PROACTIVATE. The acronym denotes the action required for regeneration of the planet. It calls upon businesses to Price natural capital; Radically increase energy efficiency; Opt for minimalist lifestyles that emphasise the value of experiences as opposed to acquisitions; Adopt zero waste and closed loop systems Capture CO₂ through forestation; Turn to renewables; Invest in green issues; Vigorously pursue market mechanism to punish polluters; Activate women and children to drive the change; Train staff to eco-innovate and focus on Execution by example than exhortation.

Climate change calls for a holistic and approach designed to reduce the human footprint on the planet by committing to make a 180 degree shift in lifestyles. It challenges our current paradigms of wealth and

prosperity. Who would prefer to be a billionaire with a parched throat in the arid world of 2050? It is time we started recognising the price of natural capital, of greens, rivers, mountains, oceans, glaciers and moved our natural assets way above the financial capital in the balance sheets. The pendulum of asset valuation has moved beyond tangibles. People have begun to question the very purpose of work and wealth creation.

In 1930 John Maynard Keynes imagined that richer societies would become more leisured ones, liberated from toil to enjoy the finer things in life. Yet, most people today work harder, have less leisure and less happiness. In his recent book on happiness LSE economist Lord Layard reveals – (i) money does not make people happier; (ii) middle class people who become upper class do not report feelings of happiness; Richard Farleigh, the Australian tycoon, says “You see all these boats [in Monaco] and think, well, actually I’m not that rich at all. If I’d stayed in hedge-fund game in 1995, I’d be a multi-billionaire by now. However, the billionaires I’ve met are some of the unhappiest people I know.”

The psychologist Oliver James has written a new book, Afluenza. In this he describes afluenza as an obsessive, envious addiction to consumerism that “increases our vulnerability to emotional disorders and causes high levels of anxiety and sleeplessness.” Psychologists like Daniel Kahneman of Princeton University recommend ‘experiences’ over ‘commodities’, pastimes over knick-knacks, doing over having as happiness giving. With all this evidence why should business not adopt policies and processes that make people happier rather than overload them with proliferations of products that create unneeded wants and disastrous for the ecology? As for capitalism’s wasteful materialism, even Adam Smith had a problem with it. “How many people ruin themselves by laying out money on trinkets of frivolous utility?”

On 8th December 1927, Mahatma Gandhi wrote in Young India “A time is coming when those who are in the mad rush today of multiplying their wants vainly thinking that they add to the real substance, real knowledge of the world, will retrace their steps and say: ‘What have we done?’

These words have a rug of truth even after 80 years.

Is it not the time business considered a growth model that focused on ensuring happiness not acquiring goodies? That would make some virtue climate change.

Dr Madhav Mehra, President, World Council for Corporate Governance, UK

June 2007

Driving Corporations through SEE (Social, Ethical & Environmental) Factors

In February 1967, India was due to hold a general election. Days before the country went to the polls, The Times a UK newspaper ran a series of articles under the title "India's Disintegrating Democracy". Indians, wrote the newspaper's New Delhi correspondent, would soon vote in "the fourth – and surely last – general election", for "famine is threatening, the administration is strained and universally corrupt, the government and the governing party have lost public confidence and belief in themselves as well." The reporter could discern the "already fraying fabric of the nation itself, the states were "already beginning to act like sub-nations". Rule by men in uniform beckoned – in any case, "the great experiment of developing India within a democratic framework has failed."

That 40 years later the Indian democracy has not only survived but is held as a world model speaks volumes for both our electorate and the government – Something that India Inc has to be grateful for.

In 2005, Thomas Friedman, author of "The World is Flat", said "country of snake charmers, poor people, and Mother Teresa" had been "recalibrated" – it was now also "a country of brainy people and computer wizards". Jeffrey Sachs, in "The End of Poverty", spoke of how "the return of China and India to global economic prominence" would "reshape global politics and society" in the 21st century.

The riches that our corporates boast and which enables them to give lavish salaries stem from the political stability and entrepreneurial freedom that the nation has provided them. India's strength essentially stems from 3ds – the democratic dividend, digital dividend and demographical dividend. Our digital dividend is due largely to the power of English language. It is anybody's guess where India's software industry would have been, had China been equally proficient in English.

India's ascent to greatness is a cause for joy but not enough to lunge for the bubbly. Year 2006 has been a tragic year for Bharat. The country reported the highest number of suicides by Indian farmers who so far have been the back bone of India's prosperity. 1500 farmers committed suicide in Maharashtra, one of India's most prosperous states. This does not count the suicides triggered by the Singur controversy and the protestors killed by police firing earlier in Orissa for claiming compensation.

Worst, of course, are the figures of national health & family survey relating to 2005- 06. According to this survey 74% of our children below the age of 3 are anaemic and 33% have stunted growth. 66% of our children are undernourished and go to bed hungry. Even African children fare better than India's, admits the Ministry of Women and Child Development. Indian children are worse than the United Nation's Sub-Saharan poster boy with rickety arms, swollen belly and protruding eyes. In an internal document, the government has admitted that despite a high growth rate of 8% every year malnutrition in the age group of 0-6 years has declined only by 1% over the last 8 years.

No wonder that despite our stupendous achievements during 2006 our head hangs in shame. Our businesses cannot ignore the fact that despite monumental individual successes, we continue to remain a nation with the largest number of hungry and malnourished people in the world. As per the latest National

Sample Survey 27.8% of India i.e over 28 crores are still below the poverty line. One can therefore, understand why the announcements by companies of disproportionate and gigantic increases in salaries, remunerations and bonuses, are greeted with contempt and disdain.

No one wants the business to be charitable. Today CSR is not about giving back to society but a business goal because it will help companies generate sustainable profit & growth. It has now been proved that social, environmental & ethical factors play a far greater role in asset valuation than the profit & loss account. Even in the profit matrix the recent results of Marks & Spencer, the UK retailer have shown how greening of the company and its commitment to fair trade, organic food, carbon neutrality, zero waste as epitomized in the slogan "As our sandwiches disappear, so does the packaging" have resulted in its turnaround.

The issue is not so much the size of the increase but the differential it creates the demoralization it causes because of lack of adequate measures for performance evaluation. Some companies grudge even small increases to their general work force. Studies worldwide have shown that money has little correlation with performance. No mercenary force has ever won a battle. Ostentatious managers rarely inspire, they only breed envy and feed greed. People in the company often feel cheated. In today's day and age people can stand poverty but not injustice.

It is important to instill a sense of realism in our economic performance too. Despite India being the second largest country in the world, our contribution to global trade is minuscule. In regard to GDP growth even African economies are achieving 7% per annum. Our asset valuation judged by the sensex during the past 5 months is 33rd in global league. Stock markets of 32 countries have performed better than us. For instance while the growth of our own stock market since 29 Dec 2006 is 13.1%, China 56%, Israel is 41%, Brazil 38.8%, Poland 37.7%, Malaysia 37.7% and Czech Republic is 35.7%. Thailand, Chile, Turkey, Mexico & Indonesia are all ahead of us in stock market growth.

It was only just and fair for the Prime Minister to pick up this theme in his address to CII. What is wrong in the Prime Minister telling India Inc to break cartels and abstain from ostentatious consumption and greed in their quest for profit and warned business that growing income inequalities could lead to social unrest if not addressed by the wealthy.

He said "The operation of cartels by groups of companies to keep prices high must end. Cartels are a crime and go against the grain of an open economy". Even profit maximisation should be within the bounds of decency and greed.

The advice was part of a 10-point social charter the Prime Minister presented to India Inc in a speech full of repeated references to the responsibility of private enterprises for ensuring equitable growth. Who can argue with PM that lavish weddings were a clear example of wasteful spending. "Such vulgarity insults the poverty of the less privileged," he noted. "We cannot afford the wasteful lifestyles of the western world. Conspicuous consumption must be reduced," he said. He proposed that companies should resist excessive remuneration to promoters and senior executives.

He also asked Indian industry to fight corruption. "Corruption need not be the grease that oils the wheels of progress," he said. "There are many successful companies today that have refused to yield to this temptation. Others must follow."

"Businessmen who enter politics should erect a Chinese wall between their political activities and their businesses," Singh said.

He asked companies to take up corporate social responsibility (CSR) initiatives, not with the objective of reaping tax benefits or because it has become a western management practice, but with the approach that the wealthy have an obligation to society and nature. Singh appeared unhappy about the skill-development initiatives of industry. He asked Indian industry to pay more attention to environment-friendly technologies, promote enterprise and innovation, invest in the welfare of employees and undertake affirmative action initiatives by offering equal job opportunities to people from the backward classes.

It was during the heyday of dot.com boom in the year 2000 that one day the world woke up to face the fact that Azim Premji was the world's second richest man. Once the eyes of the world turned on our subcontinent it could not miss the demographic advantage India held in terms of its market potential.

54% of our population is under 25, 35% is under 15. To the savvy market analysts this meant that India not only had the world's biggest middle class it had the untapped market of 800 million poor as well. More importantly because of the demographics this market was set for an exponential growth. Foreign Investors soon recognised that despite our bureaucracy & love of paper chase we have one of the world's most vibrant democracies protected by a robust constitution that guarantees rule of the law and fair play. The fact that more people understand English in India than even in the whole of the UK caused goose bumps to these analysts. Shortly thereafter a whole lot of MNCs, the FIIs and other private equity funds made a beeline to India.

It would, therefore, be unwise for businesses to ignore the very youth and children who triggered the transformation that has brought the world knocking at India's doors. Our heroes are the mothers who gave birth to these 1100 million people- The end game here is the numbers, stupid. Our population is our most strategic advantage. We cannot kill the very goose that lays the golden eggs.

We must not forget that the most formidable change in 2006 has been the increasing recognition of the power of the individual against the state and against the corporation. The strobe-like glare of the 21st century and the power of the blogger will simply not allow the business to focus on profits at the cost of society and environment. There is a clear message to the corporations – Beware of the blogger. He/she can turn a hero into a zero overnight. So business will be well advised to take CSR seriously and not let it become simply an extension of their PR department. Not because we want business to become philanthropic but because there is money to be made by this paradigm shift. The alternative is public opprobrium.

The world has great expectations from India. Indian corporates have done a great job so far. The Prime Minister has only offered course correction in India Inc's journey to the top of world league. India's USP is not ostentatiousness but simple living & high thinking. It is because of these that India's carbon emissions are only 21 tonnes per person per year against 792 tonnes per person in US. Similarly our usage of natural resources is only 6 tonnes per person compared to 78 tonnes per person in USA. Following the path of such minimalism is not only India's armour to protect itself from the catastrophic effect of climate change but something that it could export to the rest to the world.

India Inc must move away from the wasteful consumerist, obsessive, invidious acquisitional model of growth that increases nation's vulnerability and leads to social and emotional disorders, to an experiential model that blends with human psyche, encourages cooperative effort, provides emotional fulfillment and creates lasting happiness.

In her engaging book "Planet India", Mira Kamdar says "the world has to cheer India. For if India fails, there is a real risk that our world will become hostage to political chaos, war over depleting resources, a poisoned environment and galloping diseases.

But if India succeeds, it will demonstrate that it is possible to lift hundreds of millions of people out of poverty." This is a task that neither the government nor the corporates can do alone. This requires synergy between the two. That is possible only if India Inc drive their corporations by leveraging social, ethical and environmental factors.

***Dr Madhav Mehra, President, World Council for Corporate Governance.**

July 2007

Change Growth Model to Tackle Global Warming

*Dr Madhav Mehra

The climate change scenario in India is much worse than it looks. The inequity of climate change is writ large everywhere. The only glacier that feeds our seven rivers will flood India's waterways or the next 40 years and then will dry up completely. So our grandchildren will have no fresh water and face severe drought conditions within half a lifetime.

Yet, the action we are taking is nothing more than making a few movies and engaging in symbolic acts. It is an irony that while the world has been polluted by the rich industrialized North, the real sufferers of climate change will be the poor of the East and inhabitants of Africa.

The developing countries are being criticized today for being unmindful of environmental like India, China and Brazil. Whilst there can be no mercy for any kind of environmental damage caused by high growth economies pollution North countries have to realize that developing countries have a right to grow and that it is only fair that the North meets the costs of the South's growth, at least upto a take-off stage. In fact, it was this moral compulsion that brought in the concept of carbon credits. But over the years the price of these carbon credits has reduced so much that they have lost their shine.

They are already 25 million climate refugees displaced by climate-induced disasters such as those in the Papua New Guinean Carteret Islands. They have been forced to relocate because of the rising ocean level. Bangladesh is one of the most vulnerable countries in the world. 259 km of river delta islands near the Bay of Bengal have vanished in the last 30 years.

The strategy, therefore, to deal with climate change, is going to be different for poor countries. While carbon tax, financial incentives and increased insurance premia can force people to go green in developed countries, the grim poverty of Asia and Africa calls for an integrated action plan, where the North implements the "polluter-pays" principle and provides scientific and technological know-how, as well as infrastructural support, and transfer of technology to the South to bring it to a level playing field.

The environmental footprint of the poor is a fraction of their rich counterparts. Creating wealth through unbridled consumerism and proliferation of products that create unneeded wants can be disastrous for the ecology. India's ecological footprint i.e. the natural material used per person per year, is one twelfth of US and Europe.

If the rapid rate at which the developing economies are growing translates itself into consumerism our mission of bridging the gap is going to result in Climate change calls for an approach designed to reduce the human footprint on the planet by making a 180 – degree shift in lifestyles an ecological catastrophe. We therefore need to change our growth model and move our economy from an acquisitional mode to an 'experiential' mode.

We have to find ways to dematerialize products and opt for minimalist designs. India will thus have an even more legitimate right to demand from the North, credits for saving the environment by adopting a dematerialized, low carbon, experiential model of growth.

Just as it is real that climate has changed due to human activity, humans have the power and technology to reverse the damage. For this to happen business has to be brought to the forefront of the climate change agenda. Our focus has to be on galvanizing businesses for a robust response to climate change in a way that opens new vistas of growth and development, advancing human happiness.

The 8th Environment Conference in Palampur brought to the fore an eleven-point plan called PROACTIVATE. The acronym denotes the action required for regeneration of the planet. It calls upon businesses to Price natural capital; Radically increase energy efficiency; Opt for minimalist lifestyles that emphasise the value of experience as opposed to acquisition; Adopt zero waste and closed loop systems; Capture CO2 through forestation; Turn to renewables; Invest in green issues; Vigorously pursue market mechanism to punish polluters; Activate women and children to drive the change; Train staff to eco-innovate and focus on Execution by example rather than exhortation.

Climate change calls for a holistic approach designed to reduce the human footprint on the planet by committing to make a 180-degree shift in lifestyles. It challenges our current paradigms of wealth and prosperity. Who would prefer to be a billionaire with a parched throat in the arid world of 2050?

It is time we started recognizing the price of natural capital – of greenery, rivers, mountains, oceans and glaciers and moved our natural assets way above the financial capital in the balance sheets. The pendulum of asset valuation has moved beyond tangibles. People have begun to question the very purpose of work and wealth creation.

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In 1927, Mahatma Gandhi wrote in Young India: **“A time is coming when those who are in the mad rush today of multiplying their wants, vainly thinking that they add to the real substance, real knowledge of the world, will retrace their steps and say: ‘What have we done?’”**

After 80 years, these words ring true.

***Dr Madhav Mehra is President of World Council for Corporate Governance and of World Environment Foundation in UK.**

August 2007

Moving from the casino culture to an equitable society

Can businesses accomplish what governments have failed to achieve?

*Dr Madhav Mehra

Ever heard of a 10 day old prime minister charging the country with 23 bills? In a break with tradition, Gordon Brown, UK's newly appointed prime minister, has announced 23 bills on diverse areas such as climate change, constitutional reform, energy security, counter terrorism and pensions without waiting till November when a joint session of Parliament is addressed by the Queen. The legislation aims to empower people and enhance the role of local authorities. The announcement is intended to allow public debate on vital issues before they become law, a departure from the style of his predecessor, Tony Blair. By seeking the involvement of people in his many faceted reform agenda, immediately after taking over, prime minister Gordon Brown has taken a high ground that his peers will find difficult to match.

A significant change is the move away from the casino culture where prosperity was supposed to be gained by the spin of roulette. The super casino that was announced by his predecessor with so much fanfare to give 3,000 jobs to the poor of Manchester is now supposed to be 'dead in the water'. This has killed the spread of Las Vegas type style casino culture in Britain. The initial decision to set up super casinos was an attack on family values, morality and equity. This must be bad news for commercial organisations taken in by Tony Blair's flamboyant projection of these casinos as wealth creators. This was no sustainable way to regenerate poor areas and therefore should serve a lesson to those who use such quick rich tactics.

Mr Brown has adopted open government, power to people and affordable housing as the key planks of his reform agenda. The prime minister plans to increase the number of housing starts and build 3 million homes for first time buyers. Two consultation papers have already been launched 'delivering housing and regeneration' and 'tenant empowerment'. Legislative proposals are being published to create a new regime for covered bonds to help mortgage lenders finance more affordable 20-25 years fixed rate mortgages.

Under the climate change bill statutory targets will be imposed to reduce UK CO2 emission by at least 60% by 2050 and 26% to 32% by 2020. It will also introduce 5 year carbon budgets requiring the government to set through secondary legislation binding limits on CO2 emissions with effect from 2008. A new statutory advisory body, the Committee on Climate Change will be set up to advise how to achieve targets. The bill would establish regular reporting mechanism to Parliament to enable Parliament to monitor the effectiveness of the policies under the constitutional reform bill. Parliament would have a statutory role in the process of ratifying international Treaties.

Another innovative bill is unclaimed assets bill which aims to tap money lying in dormant bank and building society accounts for the public benefit. The bill provides for assets to be distributed to the community particularly for purposes related to youth services, financial capability and inclusion.

Britain has become a country of two worlds. Mr Brown's steering of the treasury during the ten years of his Chancellorship has made the economy one of the strongest ever backed equally by consumer spending triggered by booming house prices. Rich have never had it so good. But it is the poor who are facing the brunt with prices for homes to food, transport and higher education shooting up phenomenally. 1.6 million families are on the social housing waiting list. Half the people in social housing have no jobs to go to. Child poverty has been on the increase despite tax credits. Loan sharks are exploiting the poor and pushing them into debt trap by baiting them with loans at usurious interest rates of 177% knowing fully well they will never be able to repay the principal.

Law enforcement and justice system is the key to any just society. Britain still has an archaic system where justice is administered by your ability to pay. With its two tier legal system you not only pay to solicitors but also counsels who represent you in the court. With legal aid disappearing, an unrepresented, under resourced litigant has little chance of getting justice. The Constitution Reform Bill is facing opposition from judges themselves. Inequalities can be insidious. People can live in poverty but cannot stand injustice. Inequalities breed discontent and result in crime-ridden societies where better off languish in walls of security.

Mr Brown has to be commended for his vigorous pursuit of an equitable society and social inclusion. In his Oxfam's Gilbert Murray Memorial lecture as the Chancellor of the Exchequer, Mr Brown said: "Prosperity to be sustained has to be shared. Prosperity and morality go hand in hand. And as we embark on a technological revolution, we must resolve to include in the new opportunities the people and places that the world has too long forgotten. We must strive for a more global social inclusion."

Charity must begin at home. Proof of the pudding lies in eating. Politicians are to be judged not by what they say but what they do. Strategy to pull out from Iraq will be the key to finding money for reforms and establish Brown's credibility. One cannot forget the telling remark made by the longest surviving combatant of the second world war on the British TV recently: "all wars are calculated condoning of slaughter". Foreign policy is the key to the vision of shared prosperity because wars guzzle funds that can be used for development. The nasty diplomatic spat with Russia over the grisly killing of one man is an overreaction. Proactive cooperation with Russia can save millions of lives by preventing unjust wars in Africa, alleviating poverty, anti AIDS and HIV measures, expediting middle east peace process, exit strategy in Iraq and counter terrorism efforts.

This year's corporate governance conference being held in London on 20-21 September focuses on the theme of "creating a better world through corporate governance". Last year has shown that while governments are rolling back regulation, businesses are exceeding government expectations in engaging with social, environmental, ethical and climate change issues. Transparency is increasingly becoming a competitive advantage. Recent pall of gloom over the markets is nothing but market adjustment triggered by the excessive opacity of hedge funds and LBOs. Participants at the Palampur conference on climate change, last June, felt that climate change is the business of all businesses. With green stocks occupying the hottest spots, combating climate change has become both a value enhancer and an equaliser. Renewable technologies would not only reduce the dependency of the world on fossil fuel but will also transfer power to the poorer regions thus reducing the urban rural and north south divide.

The conference will debate whether pursuit of best practices in corporate governance can create a more equitable, transparent, inclusive, ethical, socially and environmentally responsible low-carbon world and whether businesses can accomplish what the successive governments have failed to achieve.

***Dr Madhav Mehra is President of World Council for Corporate Governance and of World Environment Foundation in UK.**

September 2007

IOD helping to Realize the Indian Dream

*Dr Madhav Mehra

IOD is proud to celebrate the 60th anniversary of India's independence. India today has become a toast of the world and the most favourite destination of investors. There was never a better time to be born in India.

IOD has been in the forefront of India's transformation during 17 years of these 60 years. In August 1990 when IOD announced its first World Congress on Total Quality, my friends in the UK and USA laughed. They said Quality and India are contradictions. How on earth could I expect world authorities such as Juran, Deming and Taguchi to attend a Quality Congress in India".

We have come a long way since then. Some of the biggest Fortune 500 companies including Coca Cola, Barclays, BT and Deutsche Bank today apply for the prestigious Golden Peacock Awards which were set up by IOD 15 years ago. Later, when we set up the Golden Peacock Awards for quality, environment, innovation, corporate governance, corporate social responsibility etc, the companies competed vigorously and improved their performance infinitely.

IOD has been converging the themes of quality, environment and governance in its skill development programmes, seminars and conferences for Indian businesses. It is IOD's holistic focus that has helped transform India as one of the lowest cost manufacturing hub. IOD has helped thousands of small-scale enterprises to achieve ISO 9001 certification under its fast track Certification Scheme. The annual World Quality conferences and institution of Golden Peacock National Quality Award have played a powerful role in India's transformation.

The collapse of giant corporations like Enron, World Com, Arthur Anderson has resulted in enhanced focus on issues of transparency, integrity, ethics and accountability.

All this has widened the role of Corporate Governance. The issue of statutory compliance is no longer as important as ethics and social responsibility of the business. Shareholder value as a concept has lost the plot because of the interdependence of the world brought about by globalization and connectivity. It is no longer a dominant business driver and is getting increasingly discredited.

IOD was instrumental in the formation of World Council for Corporate Governance, which has chapters in several countries. World Council for Corporate Governance has since organized 7 International Conferences on Corporate Governance. 34 countries are participating in the 8th International Conference on Corporate Governance being held in London on 20-21 Sept 2007.

Soon after the formation of World Council for Corporate Governance, IOD set up Centre for Corporate Governance in India under the chairmanship of distinguished Chief Justice of India Justice A M Ahmadi. This has been followed by setting up of 'Centre for Social Responsibility' under the chairmanship of Justice P.N. Bhagwati, a very distinguished former Chief Justice of Supreme Court of India. Its second Global Conference on Corporate Social Responsibility held in Portugal on 15-17 Feb 2007 was a grand success.

India's resurgence stems from its unique demographic situation. 54% of population is below 25. IOD has set up the International Institute of Management & Governance at Palampur in Himachal Pradesh. The Academic Council of the IIMG includes Dr Ola Ullsten, former Prime Minister of Sweden, Dr Olivier Giscard d'Estaing Founder and Managing Director of INSEAD, Mr Ruud Lubbers former Prime Minister of Neitherland, Prof Viviane de Beaufort, Essec Business School, France, Justice P N Bhagwati former Chief Justice of India, Justice M N Venkatchaliah former Chief Justice of India, Justice A M Ahmadi former Chief Justice of India, Mr N M Kondap Vice Chancellor, NMIMS, Mr Vinod Dhall IAS Offg Chairman, Competition Commission of India, Mr Suresh Prabhu former Union Minister for Environment.

IOD believes that the training has to be an integral part of the transformation of India's business & must start with the boards. IOD is therefore spearheading a movement to train corporate leadership in the new role of directorship. It has specially designed a most comprehensive transformational programme for company directors called Masterclass for Directors.

IOD's latest initiative is the launch of APEX 60 (Advisory, Planning, Executive and extraordinary). IOD feels that the impact of increased life expectancy and enhancing cognitive powers of healthy people due to advances in medical science is not being properly recognized. The profound consequences of people spending more time in retirement than working life have now realized. APEX 60 is designed to take care of the financial, social, psychological and physical needs of the sixty plus.

IOD believes that it must catapult India's youth into the leaders of the world. It has started an academy of Young Leaders in Kolkata and Academy of Vocation Learning in Palampur. Its course include various subjects such as Organic Farming, Combating Climate Change, Renewable energy and Managing Family owned Businesses.

India's tryst with destiny began with the Independence 60 years ago. IOD is proud of India's achievements but it is equally focused on the challenges ahead. At 60 India continues to be a country with the largest number of hungry & malnourished people and illiterate women. Our greatest threat stems from the sharpening inequalities and climate change. The solution to both problems lies in our fight against climate change. This requires an in depth focus on revolutionizing energy supplies and shifting dependence from fossil fuels to renewables such as solar energy and biomass which has the potential to transform rural-urban development economics. For instance 600 million tonnes of agricultural waste of India, with appropriate technology, can produce cellulosic ethanol equivalent to 80000 mega watts of power, i.e. 60% of India's installed capacity and create 30 million new jobs. Hence the theme of this Foundation Day "Climate Change is the business of all businesses".

***Dr Madhav Mehra is President of World Council for Corporate Governance and of World Environment Foundation in UK.**

Octob 2007

The Lack of Market Liquidity is Because of Lack of Transparency

We are witnessing some of the strangest happenings right in front of our eyes. I don't mean just the defeat of Australia at the hands of Minnows Zimbabwe in Cape Town in the of World Twenty20 Championship. It is the queues outside the solid rock financial institutions such as the Northern Rock and the credit squeeze of banks like the Barclays. The hedge funds which were meant to be the shock absorbers of the market economy have tumbled the market.

We have just experienced one of the most reckless periods of lending and deal making in recent history. Unbridled individual greed of the market manipulators has posed once again the greatest threat to market economy with the connivance of western governments. With central banks bailing out the banks ordinary tax payers are underwriting the mistakes of big people whose take home packages are reported to be in millions of dollars with bonuses.

The rules of the game in the financial markets are set up solely to benefit the financiers whether in London, New York or Hong Kong. Globalisation today appears to be run in the interest of big monied class which has western governments in its thrall. As Will Hutton says in Guardian:

“Interpol should make arrests in New York, London, Tokyo, Beijing, Frankfurt and Paris, starting with all the executives in the credit-rating agencies who blithely ranked the debt as creditworthy in exchange for fat fees and freebies from the very banks who were making the absurd loans. Governments should bring suits against the executives involved, the repositories of vast personal wealth, to help repair the hole in private and public balance sheets.”

All this has happened despite calls for transparency which followed the collapse in September 1998 of Long Term Capital Management, a giant hedge fund. Hedge funds and derivatives are financial innovations supposed to protect the market shocks while letting the financial system get on with its job. But they cannot function effectively if they act like a black box nurturing an environment of confusion and concealment.

Global markets in the recent months have seen highly aggressive private equity takeover deals financed by debt provided by banks. These debts are also structured the same way as subprime mortgages. When the subprime markets collapses the private equity funds are unable to sell the debt to CLO and hedge funds thus triggering an all around panic.

The problem was that western governments playing hostage to the big financiers failed to regulate them despite warnings. Markets became jittery only because following the subprime lending crisis nobody knew who had lost what. Market valuation of CDOs (Collateral Debt Obligations) and CLOs (Collateralised Loan Obligations) are presumptive. The exposures are not objectively validated. Banks behind the subprime loans had sold the debt to other banks and specialised funds known as CLOs and hedge funds exposing them to billions of dollars of debt when mortgagees defaulted.

It is therefore naïve to suggest that self-regulation can work in the markets. In an interview to Wall St. Journal, Eliot Spitzer, the former Attorney General of New York, said: "The honour code among CEOs didn't work. Board oversight didn't work. Self-regulation was a failure". The situation today shows no change.

The biggest challenge for the corporations, therefore, is how to replace greed as a driver of corporate agenda with something more substantial and subliminal. This may call for a 180 degrees shift in corporate attitudes from focusing on "how not to get caught" to "how to make a difference". We have to change our metaphors of success "winner takes all" and "success at all costs" and develop a value system that prides in ethics, morality, equity, legitimacy, transparency, value dissent and diversity. Transparency implies courage to admit you were wrong and say: "We are sorry we made a mistake".

The good news is that studies reveal that transparency is a competitive differentiator as it restores both investor and customer confidence and creates value for the business.

November 2007

Business models for combating climate change and social inclusion

While we are reveling in the jubilations sparked by the joint award of Nobel Peace Prize to IPCC startling evidence is emerging that IPCC downplayed the impact of climate change. Christopher Rapley , director of Antarctic Survey claims that Arctic could become ice free by the middle of this century. He says IPCC's report suggesting ice cover until the end of the century is misleading. The denial machine that started functioning ever since a Swedish chemist Svante Arrhenius asserted back in 1896 "we are evaporating our coal mines into the air", is revving up full throttle. An oil company is reported to be paying \$10,000 for each article that runs down the recommendations of the IPCC. It is time to act.

Climate change and environmental degradation are far too complex issues to be solved simply through proclamations. Sir Nicholas Stern has a stern warning. Climate change could reduce global consumption by 20%. Is it not a good thing? The rub is in the next statement. He says, this could mean GDP reduction of 5%. The question is why should reduction in consumption of materials reduce GDP? After all it is our obsessive materialistic consumerist culture that has brought us to such a pass. Is the fault not with our belief that success means a big house, a big car, a big TV, a big refrigerator , a big washing machine and proliferation of unneeded products that are dangerous for health and disastrous for ecology. It has sinister repercussions. This means if we help the poor to become rich they will only add to our environmental nightmare.

The tragedy is that this acquisitive culture is resulting in Afluenza, an emotional disorder caused by envious greed described by Oliver James in his book by the same name. The question is what can business do that cause happiness without environmental or social damage. How can companies create wealth by simply letting people have fun? Daniel Kahneman, a psychologist at Princeton University who won the Nobel Prize for economics in 2002 reckons people cherish experiences over commodities. The most durable amusements are the ones which have application and attention. People love doing than having. So, can we move our economy from this acquisitional mode to an experiential mode?

We have to question how did we come to create an economic system which is so contrary to nature's biological processes and is based primarily on extraction, depletion, waste and disposal. As Paul Hawkin, the author of Natural Capitalism questions: how is it we create an economic system that confuses the capital liquidation with income? How is it that our pricing system tells us it is cheaper to destroy the earth than to conserve it? Is it normal to have an economic system that discounts the future and sells of the past? Wasting scarce natural resources to achieve immediate profits does not lead to value creation and wasting environment to achieve economic growth is neither economic nor growth.

In October 1994 a group of 16 scientists, economists, policy makers and business leaders met at Carnoules in France and published a declaration, which is known as the "Carnoules Declaration". The declaration called for radical increase in resource productivity and expressed the hope that within our generation, nations can achieve a ten fold increase in the efficiency with which they use energy, natural resources and other materials." While the group which called itself the "Factor Ten Club" had made only basic commonsensical recommendations for satisfying human needs without unduly damaging environment, the implementation has faced monumental resistance.

Business has to account for the value addition to the natural and human capital. Society will not gain if financial capital increases at the cost of natural capital. We have to create new production and distribution processes to reverse the loss of natural capital and eventually increase its supply. This will involve more than product design, more than marketing and competition. It will mean a fundamental redesign of business models, its roles and responsibilities.

This also requires changes in the policy instruments by governments. The governments have to decide they will no longer be taxing income but the use of environment, the environmental impact caused in production and consumption. They have to take away subsidies from extractive industries and provide incentives for increasing the productivity of natural resources. They have to reward eco-innovations and give subsidies to renewables. Innovation can be a great equalizer. It is a tragedy that even after a century of fossil fuel based automobile centered, wasteful economy, we have little of substance to boast about our record for change to renewable. Think how the whole world's economy can change once we are able to use photo voltaic cells on a massive scale for heating our homes and powering our cars. While the fossil fuel may not last beyond the current century, the solar power is synchronous with human life and therefore has Infinite potential. Think how the world economic balance will change once solar power becomes the dominant energy paradigm. It will finish, western hegemony and put Asian and African economies with the abundance of solar energy in the forefront.

There is a huge potential in solar energy waiting to be realized. The material which forms the basis of the vast majority of today's solar cells, silicon is expensive and cumbersome. There is no compelling reason why new materials of a tenths of a twentieth the price of silicon could not be used – all that is needed is ingenuity, incentives and finance for relevant research. None of these factors is at present a limited resource. Recently, a Silicon Valley start-up, Nanosolar, has opened the first really large non-silicon solar-cell factory.

There is a grander vision in promoting climate change agenda. We believe that the renewable technologies such as solar power, wind power, biofuel & hydel power can have a transformational effect on the poverty situation by transferring wealth to rural areas and "have not regions". India's 600 million tons of agricultural waste can generate equivalent of 80,000 megawatts of electricity i.e. 60% of its installed capacity, create 30 million jobs and empower rural India.

The problem with the implementation of climate change agenda as with other issues such as globalisation, poverty and inequality is that it is still being dealt with in isolation and not as a part of a cohesive, integrated approach.

We believe our biggest threat stems from the sharpening inequalities. People can stand poverty but cannot withstand injustice. It is an irony that the grueling and mind-numbing poverty that we face in this world exists alongside extreme affluence and abundance. Indeed when we look at the amount of money we waste it would seem that the world has no shortage of financial resources. United States, which prides itself as the richest country in the world itself, is a classic example of waste. It has been estimated that of the \$9 trillion spent every year in the United States, at least \$ 2 trillion annually is wasted.

For initiatives on climate change, waste reduction and poverty alleviation to succeed these have to be dealt with holistically keeping the business as a driver of the change agenda. Business can be made to realize that the pollution and waste are nothing more than business inefficiencies, process inadequacies and there is money to be made in their elimination. Business has a lot to gain from strategies for combating climate change. The deliberations of the 8th International Conference on Corporate Governance held in London in September 2007 revealed that companies that integrated social and environmental issues into their business goals created greater wealth for their shareholders.

We believe that progress on action in combating climate change has been woefully slow due to the fear that this would mean retardation of economic development. 80% of the world's poor who aspire to share the prosperity promised by globalization are unwilling to buy into it even when they know that its consequences will be revisited upon them with greater severity. Yet, if we allow the consumerist, acquisitional model of

development, our mission to bridge the inequalities could become an environmental nightmare. The saving grace of poverty is that the ecological footprint of poor nations is less than one twelfth of the developed ones.

Just as it is real that climate has changed due to human activity, humans have the power and technology to reverse the damage. For this to happen business has to be brought to the forefront of the climate change agenda. Our focus has to be on galvanizing businesses for a robust response to climate change in a way that opens new vistas of growth and development, advancing human happiness.

The 8th World Congress on Environment Management in Palampur brought to the fore an eleven point plan called PROACTIVATE. The acronym denotes the action required for regeneration of the planet. It calls upon businesses to Price natural capital; Radically increase energy efficiency; Opt for minimalist lifestyles that emphasise the value of experience as opposed to acquisition; Adopt zero waste and closed loop systems; Capture CO2 through forestation; Turn to renewables; Invest in green issues; Vigorously pursue market mechanism to punish polluters; Activate women and children to drive the change; Train staff to eco-innovate and focus on Execution by example rather than exhortation.

Climate change calls for a holistic approach designed to reduce the human footprint on the planet by committing to make a 180-degree shift in lifestyles. It challenges our current paradigms of wealth and prosperity. Who would prefer to be a billionaire with a parched throat in the arid world of 2030?

It is time we started recognizing the price of natural capital – of greenery, rivers, mountains, oceans and glaciers and moved our natural assets way above the financial capital in the balance sheets. The pendulum of asset valuation has moved beyond tangibles. People have begun to question the very purpose of work and wealth creation. It is time we question our economic model and turn the 'dismal science' of Carlyle into an instrument of sustainable happiness.

The challenge lies in developing policy instruments that can turn the impending catastrophe into an opportunity for change and innovation of business models and make them compatible with environmental resurgence, CO2 reduction and poverty alleviation. This means a model of growth determined not by proliferation of products but quality of emotional experience, a model based on renewable energy, solar power, wind energy and biofuels that can have a transformational effect on the lives of people in rural areas.

Climate change, therefore, is an opportunity for social change that we have been waiting for. It can bridge the North South divide and reduce the urban & rural inequalities with the speed we could have never imagined. Decisive evidence is emerging that stabilizing earth's climate is not only profitable but will revolutionise the fight against poverty. Climate change will shape the future of business as never before. It will power unprecedented growth through new business models based on low carbon, dematerialized growth that emphasizes the human experience rather than acquisition. Climate change could provide a huge hope to the poor of the world that their misery may soon come to an end.

***Dr Madhav Mehra is the President of UK based World Environment Foundation and World Council for Corporate Governance.**

Changing Growth Model to Combat Climate Change

Climate change and environmental degradation are far too complex issues to be solved simply through proclamations. Sir Nicholas Stern has a stern warning. Climate change could reduce global consumption by 20%. Why should we lament? The rub is in the next statement. This would mean GDP reduction of 5%. Why should reduced consumption of material lower GDP? Is it not our obsession with materialistic and consumerist growth that has brought our planet to such a pass? Why should human well being be measured in terms of a bigger house, a bigger car, a bigger TV, a bigger refrigerator, a bigger washing machine? Why growth should mean proliferation of unneeded products that are dangerous for health and disastrous for ecology? Such a paradigm of development has sinister repercussions on environment. This means our efforts to enrich the poor would result in the new wealth being squandered on proliferation of products thus adding to our environmental nightmare.

The tragedy is that this acquisitive culture is not only triggering climate change but also resulting in Afluenta, an emotional disorder caused by envious greed described by Oliver James in his book by the same name. The question is what can business do to replace this model by one that creates enjoyment without environmental damage. A whole lot of companies today are creating enormous wealth by letting people have fun. Disneyworld is just one such company. Daniel Kahneman, a psychologist at Princeton University who won the Nobel Prize for economics in 2002 reckons people cherish experiences over commodities. The most durable amusements are the ones which have application and attention. People love 'doing' than 'having'. So, can businesses focus on the enormous possibilities inherent in moving our economy from this acquisitional mode to an experiential mode?

In October 1994 a group of 16 scientists, economists, policy makers and business leaders met at Carnoules in France and published a declaration, which is known as the "Carnoules Declaration". The declaration called for radical increase in resource productivity and expressed the hope that within our generation, nations can achieve a ten fold increase in the efficiency with which they use energy, natural resources and other materials." While the group which called itself the "Factor Ten Club" had made only basic commonsensical recommendations for satisfying human needs without unduly damaging environment, the implementation has faced monumental resistance.

Business has to account for the value addition to the natural and human capital. Society will not gain if financial capital increases at the cost of natural capital. We have to create new production and distribution processes to reverse the loss of natural capital and eventually increase its supply. This will involve more than product design, more than marketing and competition. It will mean a fundamental redesign of business models, its roles and responsibilities.

This requires changes in the policy instruments by governments. The governments have to decide they will no longer be taxing income but the use of natural capital. Companies will have to pay taxes based on the environmental impact of their production and disposal processes. Governments will take away subsidies from extractive industries that damage the environment and provide incentives to those who increase the productivity of natural resources. They have to reward eco-innovations and subsidise renewables.

Innovation can be a great equalizer. But it cannot be fostered in a climate of distrust. You have to allow people to make mistakes; make them proud of admitting mistakes. There should be rewards for owning mistakes. The courage required in owning failures should be inculcated in the schools.

It is a tragedy that even after a century of fossil-fuel based, automobile centered, wasteful economy, we have little of substance to boast about our record for change to renewable. Think how African economies can change once we are able to produce photovoltaic cells in a cost-effective way. It would encourage its use on a massive scale for heating our homes and powering our cars. While the fossil fuel may not last beyond the current century, the solar power is synchronous with human life and therefore has infinite potential. The whole economic balance will change once solar power becomes the dominant energy paradigm. The economic inequalities between North and South will become a thing of the past.

Progress on action in combating climate change has been woefully slow because the rich are too trapped in their carbon guzzling lifestyle and the poor nations suspect that this is yet another device of rich nations to prevent the poor from bridging the gap. If businesses could persuade the rich to realize that there are other ways to heighten their pleasures and enhance their experiences than buying unneeded goods, the businesses could make a lot more money and enhance customer enjoyment. This will in turn change the development paradigm of developing nations. They would understand that they can be rich without having to follow the industrialised, consumeristic model of the west. Our salvation lies in making both rich and poor understand that the adoption of an acquisitional model of growth by 80% of the world's poor would result in an environmental nightmare. The saving grace of poverty is that the ecological footprint of poor nations is less than one twelfth of the developed ones.

Climate change therefore is an issue of governance, developing policy instruments and statutory regulations that will help technological breakthroughs and make people change their ways of consuming and producing. The problem has to be dealt with in a holistic and integrated manner and not the piecemeal, isolated approaches we have used in the past with globalisation, poverty and pollution. There are far greater benefits in promoting the climate change agenda than meet the eye. Our biggest threat stems from the sharpening inequalities. People can stand poverty but cannot withstand injustice. Renewable technologies such as solar power, wind power, biofuel & hydel power can be great equalizers in redressing regional imbalances. These can have a transformational effect on the poverty situation by transferring wealth to rural areas and "have not regions". India's 600 million tons of agricultural waste can generate equivalent of 80,000 megawatts of electricity i.e. 60% of its installed capacity, create 30 million jobs and empower rural India.

For initiatives on climate change, waste reduction and poverty alleviation to succeed the business has to be the driver of change agenda. Business has to be made to realize that pollution and waste are nothing more than business inefficiencies and process inadequacies. There is money to be made by their elimination. That business has a lot to gain from strategies for combating climate change. The deliberations of the 8th International Conference on Corporate Governance held in London in September 2007 revealed that companies that integrated social and environmental issues into their business goals created greater wealth for their shareholders.

Earlier the World Congress on Environment Management held in the Himalayan town of Palampur brought out an eleven point plan called PROACTIVATE. The acronym underscores the action required for regeneration of the planet. It calls upon businesses to Price natural capital; Radically increase energy efficiency; Opt for minimalist lifestyles that emphasise the value of experience as opposed to acquisition; Adopt zero waste and closed loop systems; Capture CO₂ through forestation; Turn to renewables; Invest in green issues; Vigorously pursue market mechanism to punish polluters; Activate women and children to drive the change; Train staff and community to execute the change and adopt Experiential model of growth.

PROACTIVATE is a holistic approach designed to reduce the human footprint on the planet by committing to make a 180-degree shift in lifestyles. It challenges our current paradigms of wealth and prosperity. It aims to create wealth by enhancing experiences as opposed to acquiring products and proliferating the planet.

It is time we question our economic model and turn the 'dismal science' of Carlyle into an instrument of sustainable happiness. This is the agenda we have set ourselves for the 3rd Global Conference on Social Responsibility in Portugal in February 2008. We believe that combating climate change in a holistic manner will result in social inclusion. This is why combating climate change should become the upper-most social responsibility of business.

Climate change is an opportunity for social change that we have been waiting for. It can bridge the North South divide and reduce the urban - rural inequalities with the speed we could never imagine. Decisive evidence is emerging that stabilizing earth's climate is not only profitable but will revolutionise the fight against poverty. Climate change will shape the future of business as never before. It will power unprecedented growth through new business models based on low carbon, low energy, dematerialized growth that emphasizes and enhances the human experience on this planet. A robust response to climate change offers hope to the world's poor that their misery may soon come to an end.

***Dr Madhav Mehra, President, World Council for Corporate Governance**

Feb 2008

Climate Change – An opportunity that knocks after a million years

*Madhav Mehra

Oscar Wilde is supposed to have defined a pessimist as someone who complains of noise when opportunity knocks. Business thrives on optimism. Lee Scott, CEO of Wal-Mart and Stuart Rose, CEO of Marks and Spencer both admit that they started their sustainability drive as “a defensive strategy”, but it has turned out a cash cow creating value for both customers & company in an unprecedented way while protecting environment.

The failure of Bali negotiations shows that governments with diverse constituencies are ill equipped to solve problems so cataclysmic and so urgent as climate change. That climate change is real, catastrophic and man made is indisputable. That it is unjust in the severity of its consequences is irrefutable. Billions living in South who have never switched on an electric bulb face the worst consequences while North which has caused climate change and controls vast cold deserts may even be better off in the short run with global warming. The overriding issue therefore is of the impact of climate change on the sharpening inequalities which already pose the greatest threat to security. Poverty and hardship seem more insidious when juxtaposed against abundance and opulent consumption. People can stand poverty but not injustice. It is the perception of this injustice that becomes the breeding ground for all forms of terrorism. Even more so in this connected world.

None realises the importance of stability and security more than global business. Business is the greatest gainer of globalisation. It understands the power of renewable technologies such as the wind power and solar energy to redress the global imbalances. It understands the importance of balanced scorecard to serve different constituencies – combat climate change, alleviate poverty and create value for company. Business is more adept to a holistic approach to adopt multiple agenda by tapping the formidable power of technology. It realises that oil supplies are limited. Though forecasts of oil supplies are dodgy because oil supplies, oil exploration, oil extraction or oil reserves have never been subjected to audit, experts believe oil production may peak this decade itself. At the same time energy requirements are rising with a vengeance. It sees the huge potential in serving the needs of hundreds of millions of people who are yet to switch on power.

Climate change is an opportunity similar to one this planet experienced millions of years ago when extreme drought forced hominids to adapt to new environment and brought humans with larger brains into being.

The social responsibility of the business even from the days beyond Milton Friedman and Adam Smith has been to make money unabashedly. In the knowledge economy of today the route for making money has changed. It now passes through social agenda and environmental uplift. The corporate social responsibility today has turned out to be corporate business opportunity. Businesses are burning midnight oil in proving who is socially or environmentally more responsible. While governments are struggling to cut CO2 by mere 7% below 1990 levels, some smart companies have achieved spectacular results in their bid to drive a low cost economy.

HSBC bank & ITC claim they have offset their carbon impact and become carbon neutral. M & S claims they will soon become zero waste and have grossed a billion pound profit on the back of their sustainability, "Fairtrade", organic food, and zero waste slogan "Just as our sandwiches disappear in your mouth so does our packaging."

DuPont claims to have reduced GHG emission by 50%. Dow Corning has made \$1 billion through eco-embedded innovations. Ford has boosted productivity and saved money by rebuilding its River Rouge plant in Detroit ecologically, installing skylights and a 'living roof' that reduces toxins. Several companies have followed suit. Genzyme Corporation uses waste steam for heating. The New York Jets stadium was designed to use solar cells and wind turbines to reduce energy. It now sells excess energy to the city's electrical grid. UPS & FedEx are equipping vans with hybrid and fuel cell engines to reduce fuel costs & pollutants. Starbucks claims it saved \$36 million in 2001 through CSR and sustainability projects that helped keep employees loyal and cut down turnover costs.

Nine leading UK companies are signing up for carbon footprinting standards to address global warming in partnership with Carbon Trust, DEFRA and British Standards Institution. These include Cadbury Schweppes, Coca-Cola, The Cooperative Group, Halifax, Kimberly Clerks, Muller Dairy and Scottish and Newcastle – producer of Fosters Lager and Bulmers Original Cider. They will work with Carbon Trust to explore the best way to measure and communicate the carbon impact of their products.

The evidence shows that industry is aggressively responding to environmental challenges with a wave of innovations in alternative energy. Brazil is already meeting 40% of its transportation requirements from ethanol. Bio fuels can be produced without sacrificing land for food crops. India's 600 million tonne agricultural waste can generate equivalent of 80,000 mega watts of electricity, ie 60% of its installed capacity, and empower the rural India by creating 30 million new jobs. Radical advances in energy conservation are taking shape. Hybrid cars, solar panels, windmills, ethanol plants, nuclear fission, desalination, biofuels, organic farming, precision farming and bioengineering are but few examples. Light Emitting Diodes (LEDs) are saving 90% of the energy wasted by incandescent lights. The experts of TechCast project directed by Bill Halal, Professor of Innovation and Technology at George Washington University detail "scores of new fuel cell technologies developed to create H2 directly from biomass. Photosynthesis is offering the prospect of converting sunlight into energy as plants do, at 100% efficiency.

Tidal energy is being harnessed in Manhattan, France, and Nova Scotia. Geothermal energy is producing the first hydrogen economy in Iceland. Cold fusion is being re-examined because of new supporting evidence. Researchers at the University of California are converting the biggest problem in global warming - CO2 - into oxygen and carbon monoxide, the primary feedstock for plastics and other products. Wind turbines are being developed that ride 10 Km up in the jet stream to capture 100 times as much energy, which is transmitted to Earth on supporting cables. The U.S. military and India are studying the use of solar satellites for producing energy.

The trend is unmistakable. California Edison increased its use of renewables from 1% in 1985 to almost 30% today, and California now requires 20% of its energy to be renewable by 2017. Maine now derives 30% of its energy from hydroelectric plants and other renewables. Hawaii, and other states aim to produce 20% of all energy from renewables by 2020. The U.S. DoE thinks renewables will reach 28% by 2030, and the EU expects renewables to reach 22% of energy use by 2010."

Melting of glaciers is reducing the water supply for future generations. Water promises to be in the 21st century what oil was in the 20th century. Gangotri glacier the font that supplies fresh water to millions in India is receding by 23 meters every year. Desalination technologies will change the equation. According to TechCast studies, innovations in desalination have brought down the overall desalination costs from \$20 per gallon in 1950, to \$6 per gallon in 1960. The cost is now approaching 1 cent per gallon. Ovation Products claims it can distill water contaminated with anything into pure drinking water for 1 cent per gallon.

New business models are emerging which are material efficient and service based. The classic example is Interface Corporation, a \$ 1.1 billion company that provides "carpet service" rather than selling carpets.

They learnt to recycle carpets and found recycling makes carpets last four times longer and uses 40% less fabric while reducing the amount of replaced carpeting by 80%. This resulted in 35 fold reduction in overall use of materials. Ray Anderson the CEO says: "Sustainability doesn't cost. It pays. Our costs are down. Our products are the best they have ever been. Our people are motivated by a shared higher purpose. And the goodwill in the marketplace is astonishing. Doesn't it feel good to have this kind of commitment made by the company that you are part of? Don't you feel proud?"

Smart companies are not following piecemeal approaches to climate change. They realise that modern technology can give multiple benefits. The intimate interplay between a DNA molecule, the IT power, atomic matter, bioengineering has driven commercial innovation through the roof. Bridgestone, the Japanese tyre company no longer sells tyres in Europe. They charge customers on "pay as you use" basis. Tyres have sensors to track their usage. So instead of proliferating models, the company focuses on improving the durability of tyres. Because customers pay on usage, even the poor can afford thus the company enhances its market, improves its sales and boosts social inclusion. Lots of other companies operate similarly multiple agenda that improve their bottomline, alleviate poverty and save the planet.

Corporations are greening their businesses at an astronomical pace. Greentech could be the greatest business opportunity of 21st century. Cleaner energy companies that attract 1% of venture capital before 1999 are now getting 8% of all investment. The world market for pollution control was \$500 billion in 2000. It is expected to rise to \$10 trillion in 2020, larger than automobiles, health care and defence.

Ever since the collapse of the dotcom bubble, investors have been searching for a new El Dorado. Climate change could be the exciting new frontier with dramatic potential. In India Suzlon, a lacklustre company so far, has generated Rs 13700 crores for its promoter Tulsi Tanti through a recent IPO. Wind-turbine companies which had mini-busts in 2000 and 2004 are roaring today.

Investor interest is switching to companies that develop the enzymes which break down plant matter and turn it into fuel. "Novozymes, a Danish company, was considered a boring old specialty chemicals company until the enzymes operation was recognized," says Ronnie Lim, head of sustainable investments research at Morley, a fund management group.

The wind market today is the most developed. Three of the four largest environmental companies by market value (Suzlon from India, Gamesa from Spain and Vestas from Denmark) are wind groups. According to Impax, Turbine manufacturers should prosper in 2007, says Bruce Jenkyn-Jones, Impax's director of investments; 28 different countries are growing wind capacity, which means that turbines are sold out to 2009. So manufacturers can push through price increase. Wind turbines will, from now onwards be subject to only incremental improvements: they will become a bit more efficient, a bit cheaper to install, and a bit cheaper to build.

Solar, on the other hand, is ripe for breakthroughs. The material which forms the basis of the vast majority of today's solar cells, silicon is expensive and cumbersome. There is no compelling reason why new materials of a tenth of a twentieth the price of silicon could not be used. Eventually thin-film technology will prove a cheaper replacement. However, there may be other solar opportunities through these cell technologies. Stephen Mahon of the Low Carbon Initiative, which recently launched a £44.5m (\$82.5 m) environmental fund, says it is investing in Heliodynamics, a company which use mirrors to focus the sun's rays and thus increase the power generated.

But nanotech can provide plastic solar cells at \$0.20/watt and increase efficiency. Nanosolar Company is mass producing solar cells at far less cost by simply printing them, and expects to increase the global supply 20-fold. The world's largest solar power plant, located in the Mojave desert, is 30% efficient. The CEO says that "11 square miles could produce as much energy as Hoover Dam." The consensus is that costs will become competitive with other energy sources about 2012 to 2015, and some experts estimate solar and wind power will reach 10% of U.S. energy by 2013.

Nuclear fission produces no pollution, has a sound safety record, and compares with oil on cost. New designs like the pebble bed reactor are immune to meltdown, and waste can be stored safely if coated in glass or socked away in stable mountains for 200,000 years. A "fast breeder" design recycles spent fuel to reduce radioactive waste from 95% to 1% of the fuel used. Worldwide, the number of nuclear power plants is expected to grow from 435 today to 600 by 2010.

Organic farming is making the planet and humans both healthier. It uses less resources, improves the soil, reduces drought and erosion and improves profit through higher yield. Studies also show that organic foods produced a "dramatic and immediate" drop of pesticide levels in the bodies of children. "Free range" chicken, and grain-fed beef have less fat, less cholesterol, less vitamin A & Omega Acid compared to 'factory raised' chicken or animals. Vegetables also lose nutrients when grown with chemicals. Surveys show 90% of the public favors organic produce.

Innovations in precision farming are unfolding new opportunities of profits for companies with improved soil productivity, healthier people and healthier planet. It involves the computerized control of irrigation, seed distribution, fertilizer, and pesticides to suit variations in land identified using GPS and geographic information systems. Twenty percent of farmers in the U.S. are adopting these practices because PF reduces the amount of costly chemicals needed, raises yields, and protects the environment. A farm equipment manufacturer said, "In 10 years, every farmer will use this technology."

The most controversial area is that of carbon credits, which requires energy producers to buy permits to emit greenhouse gases. In 2006 the European Union's emissions-trading scheme was crippled by the over-allocation of permits by member countries, prompting the price to plunge by two-thirds. But James Cameron, a founder of Climate Change, is optimistic. He has raised an \$830 m fund to invest in carbon trading and says the scheme "is the best chance we have of reducing large amounts of greenhouse gases at relatively low cost".

The auto sector has been the most lethargic in innovation due to the resistance from incumbents. Each day a modern car burns fuel derived from 100 times its weight in ancient plants; yet a mere 2% of that fuel moves the driver. Tripled-efficiency, ultra light petrol-hybrid SUVs designed in 2000, are paying back in one year at European and Japanese fuel prices or two years at America's much cheaper pump prices. This year the Automotive X Prize is starting to move such designs to market just in America, they will ultimately save 8m barrels of oil a day – equivalent to finding a new, secure and inexhaustible Saudi Arabia under Detroit.

Toyota is emerging the leader in superefficient plug-in hybrid cars; electric for short commuters, petrol-hybrid for long trips. This could double the already doubled petrol efficiency of a Prius. It is using technology to make it ultra light so its petrol efficiency redoubles. If it could be biofuelled, the efficiency can be quadrupled thus raising it to 30 times today's norm.

As we multiply our energy needs to power our homes, offices, factories and vehicles for the 8 billion people in the next decade, the innovations in alternative energy will begin to lay visible foundations for a richer, cooler, fairer and safer world. Yet these advances merely reflect the tip of the iceberg of potential of innovations triggered by climate change.

Stabilizing the earth's climate would turn out not costly but profitable in more ways than one. It would unleash a new trajectory of unifying and inclusive growth. People will start questioning our obsessively acquisitional, excessively consumeristic and emotionally destroying model of growth that clutters the planet with proliferation of unneeded products that are dangerous for health and disastrous for ecology. This in turn will release another explosion of innovations and multiply business models of the Interface Corporation of US and Bridgestone of Japan as well as that of Disney which makes huge profits through enhancing enjoyment of experiences. As Daniel Kahneman, the celebrated Nobel economist says people cherish experiences far more than commodities. They love "doing" more than "having". Business will discover new potential in moving economy from this acquisitional to experiential mode.

As Madonna's recent jaunt to Rajasthan culminating in joy rides on camel's back and discovering the quaint and the unbeaten tracks has confirmed, the wet dreams of rich and famous are not acquisition of masserati objects but go for outlandish experiences that add to their brand of uniqueness – being one and the only one to have done it. With the rise in technology the luxury is becoming commoditised . The growth economies of India, China, Brazil, Russia are adding millions of HNIs (High Networth Individuals) and hundreds of billionaires each year. It is no fun for the status conscious to own things that millions of Joneses do. They are looking for lusty experiences which are also emotionally gratifying. Businesses that create such experiences reap the moolah without damaging the planet.

World economy is fueled by 2 billion teenagers whose value system is vastly different from their parents. A study of their shopping behaviour reveals they punish companies with poor record on environment and social issues and reward those who champion these issues. They are the ones who are clanking the tills at Marks and Spencer and Wal-Mart egged by the social and environmental promise of these companies. There never was a better time to be good and make money.

Climate change is an opportunity for social change that we have been waiting for. Its great potential lies in bridging the North South divide by empowering the rural poor. Climate change will revolutionise the fight against poverty and shape the future of business as never before. It will power unprecedented growth through new business models based on low carbon, zero waste and dematerialized growth that emphasizes and enhances the human experience on this planet. A robust response to climate change offers not only the biggest business opportunity of this century but also hope to the world's poor that their misery may soon come to an end.

It was Einstein who said that the significant problems that we face today cannot be solved at the same level of thinking as we created them. Once we are able to adopt new perspective the global warming turns an opportunity and the kind of reductions in CO2 that governments are bickering about look infinitesimal . Anyone who commutes to office in any of the hundreds of metropolitan towns in the world knows the huge quantities of GHG formed though the traffic jams caused by commuting rush in the morning and evening. Why, with enormous advances in wi fi, do we need everyone in the office at the same time? Would it not be cheaper to buy laptops for each office staff and pay for the connectivity so that they could work from home or at local hubs requiring minimal commuting? Winning companies are already getting their staff to telecommute. This step alone can cut down the CO2 way below the requirements of Kyoto. Fight against climate change simply needs a will to fight against business as usual. It is time we cut out the act and get real and stop looking the gift horse in the mouth.

***Dr Madhav Mehra is President of World Council for Corporate Governance.**

March 2008

Growth Models to Combat Climate Change and Alleviate Poverty

***Dr Madhav Mehra**

Theme address of Dr Madhav Mehra delivered at the 3rd Global Conference on Social Responsibility on 15th February 2008 in Vilamoura, Portugal

Global warming has become the defining issue of our era. We think that combating climate change is the foremost social responsibility of the business. The scientists are warning us of the impending doom and telling we are getting closer to it with each passing day. While the IPCC report predicted that Arctic summer sea ice will disappear by 2080, we are now being told we have already passed the “tipping point”. After reviewing his own data Jay Zwally, the NASA climate scientist tells us that “the evidence of recent melts leads him to conclude that the Arctic ocean could be nearly ice free at the end of summer of 2012”.

While the media and vested interests are sensationalizing the climate change to advance their respective agenda there is little action to prepare the world to combat the impending catastrophe in a holistic manner. What concerns us most is the terrible irony of climate change. Billions living in South who have never switched on an electric bulb or experienced a motorized vehicle face the worst consequences. As such climate change threatens not just the environment but also the international entire peace and security of this planet.

The overriding issue therefore is of the impact of climate change on the sharpening inequalities which already pose the greatest threat to security. Poverty and hardship seem more insidious when juxtaposed against abundance and opulent consumption. People can stand poverty but not injustice. It is the perception of this injustice that becomes the breeding ground for all forms of terrorism. Even more so in this connected world.

It is because of this that we are looking at climate change from a holistic perspective and exploring cohesive and integrated approaches that could use climate change as an opportunity to transform the world to make it not only cooler but more humane and equitable. The changes that scientists are telling us have taken place over a pretty long horizon. As such any mitigating solutions will also take a long time to impact. The best way therefore is to focus on adaptive strategies that enable us to use this catastrophe as a gift horse to change the way we live and work. None can do it more effectively than business.

Business is the biggest beneficiary of globalisation and therefore has a vested interest in ensuring security and stability. It also has the power of technology to innovate products and services that have least impact on environment. Climate change is the biggest threat to the business as usual. Business thrives in change and chaos. This is why the World Council for Corporate Governance targets businesses to spearhead the change. Hence the theme of this conference.

New business models are emerging which are material efficient and service-based. Smart companies are not following piecemeal approaches to climate change. They realise that modern technology can give multiple benefits. The classic example is Interface Corporation, a \$ 1.1 billion company that provides “carpet

service” rather than selling carpets. This resulted in 35 fold reduction in overall use of materials. Ray Anderson the CEO says: “Sustainability doesn’t cost. It pays.

Bridgestone, the Japanese tyre company no longer sells tyres in Europe. They charge customers on “pay as you use” basis. Tyres have sensors to track their usage. So instead of proliferating models, the company focuses on improving the durability of tyres. Because customers pay on usage, even the poor can afford thus the company enhances its market, improves its sales and boosts social inclusion. Lots of other companies operate similarly multiple agenda that improve their bottomline, alleviate poverty and save the planet.

India’s 600 million tonne agricultural waste can generate equivalent of 80,000 mega watts of electricity, i.e. 60% of its installed capacity, and empower the rural India by creating 30 million new jobs.

Stabilizing the earth’s climate would turn out not costly but profitable in more ways than one. It would unleash a new trajectory of unifying and inclusive growth. People will start questioning our obsessively acquisitional, excessively consumeristic and emotionally destroying model of growth that clutters the planet with proliferation of unneeded products that are dangerous for health and disastrous for ecology. This in turn will release an explosion of innovation and multiply business models such that of Interface Corporation .

As Madonna’s recent jaunt to Rajasthan culminating in joy rides on camel’s back and discovering the quaint and the unbeaten tracks has confirmed, the wet dreams of rich and famous are not acquisition of masserati objects but go for outlandish experiences that add to their brand of uniqueness – being one and the only one to have done it. With the rise in technology the luxury is becoming commoditised . The growth economies of India, China, Brazil, Russia are adding millions of HNIs (High Networth Individuals) and hundreds of billionaires each year. It is no fun for the status conscious to own things that millions of Joneses do. They are looking for lusty experiences which are also emotionally gratifying. Businesses that create such experiences reap the moolah without damaging the planet.

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Climate change is an opportunity for social change that we have been waiting for. Its great potential lies in bridging the North South divide by empowering the rural poor. Climate change will revolutionise the fight against poverty and shape the future of business as never before. It will power unprecedented growth through new business models based on low carbon, zero waste and dematerialized growth that emphasizes and enhances the human experience on this planet. A robust response to climate change offers not only the biggest business opportunity of this century but also hope to the world’s poor that their misery may soon come to an end.

In exploring the growth models to combat climate change and alleviate poverty illustrious participants of this conference have the most challenging task. It is equally rewarding. These participants have the power to change the trajectory of this planet in a way that will enliven the lives of coming generations. I hope you all enjoy the explorations and the conference and turn your business into an instrument of fulfillment.

***Dr Madhav Mehra is President of World Council for Corporate Governance, UK**

April 2008

The Lack of Market Liquidity is Because of Lack of Transparency

We are witnessing some of the strangest happenings right in front of our eyes. I don't mean just the defeat of Australia at the hands of Minnows Zimbabwe in Cape Town in the of World Twenty20 Championship. It is the queues outside the solid rock financial institutions such as the Northern Rock and the credit squeeze of banks like the Barclays. The hedge funds which were meant to be the shock absorbers of the market economy have tumbled the market.

We have just experienced one of the most reckless periods of lending and deal making in recent history. Unbridled individual greed of the market manipulators has posed once again the greatest threat to market economy with the connivance of western governments. With central banks bailing out the banks ordinary tax payers are underwriting the mistakes of big people whose take home packages are reported to be in millions of dollars with bonuses.

The rules of the game in the financial markets are set up solely to benefit the financiers whether in London, New York or Hong Kong. Globalisation today appears to be run in the interest of big monied class which has western governments in its thrall. As Will Hutton says in Guardian:

"Interpol should make arrests in New York, London, Tokyo, Beijing, Frankfurt and Paris, starting with all the executives in the credit-rating agencies who blithely ranked the debt as creditworthy in exchange for fat fees and freebies from the very banks who were making the absurd loans. Governments should bring suits against the executives involved, the repositories of vast personal wealth, to help repair the hole in private and public balance sheets."

All this has happened despite calls for transparency which followed the collapse in September 1998 of Long Term Capital Management, a giant hedge fund. Hedge funds and derivatives are financial innovations supposed to protect the market shocks while letting the financial system get on with its job. But they cannot function effectively if they act like a black box nurturing an environment of confusion and concealment.

Global markets in the recent months have seen highly aggressive private equity takeover deals financed by debt provided by banks. These debts are also structured the same way as subprime mortgages. When the subprime markets collapses the private equity funds are unable to sell the debt to CLO and hedge funds thus triggering an all around panic.

The problem was that western governments playing hostage to the big financiers failed to regulate them despite warnings. Markets became jittery only because following the subprime lending crisis nobody knew who had lost what. Market valuation of CDOs (Collateral Debt Obligations) and CLOs (Collateralised Loan Obligations) are presumptive. The exposures are not objectively validated. Banks behind the subprime loans had sold the debt to other banks and specialised funds known as CLOs and hedge funds exposing them to billions of dollars of debt when mortgagees defaulted.

It is therefore naïve to suggest that self-regulation can work in the markets. In an interview to Wall St. Journal, Eliot Spitzer, the former Attorney General of New York, said: "The honour code among CEOs didn't work. Board oversight didn't work. Self-regulation was a failure". The situation today shows no change.

The biggest challenge for the corporations, therefore, is how to replace greed as a driver of corporate agenda with something more substantial and subliminal. This may call for a 180 degrees shift in corporate attitudes from focusing on "how not to get caught" to "how to make a difference". We have to change our metaphors of success "winner takes all" and "success at all costs" and develop a value system that prides in ethics, morality, equity, legitimacy, transparency, value dissent and diversity. Transparency implies courage to admit you were wrong and say: "We are sorry we made a mistake".

The good news is that studies reveal that transparency is a competitive differentiator as it restores both investor and customer confidence and creates value for the business.

*Dr Madhav Mehra is President of World Council for Corporate Governance, UK

May 2008

Food or Fuel?

Hard choices before the policy makers

The governments world over have been agonising over the sharply rising food prices. Biofuels have become the whipping boy. Lord Stern, author of the UK government's influential review of the economics of climate change and former World Bank chief economist, has recently stated "the use of biofuels was very worrying, particularly the grain-based [fuels] which compete with food."

Rising food prices, and the role of biofuels in making the problem worse will be on the agenda of the Group of Eight summit in Japan in July. As countries stake out their positions, ignorance and politics seem to be bliss.

The Food and Agriculture Organisation (FAO) has warned that wheat production can drop by 10% to 142.6 million tones in 2008, as compared to 2007. The price of corn in the US has doubled in the past one year. This is attributed to the diversion of increasing amounts of corn to the production of green fuel, ethanol. During 2006- 07 America used an estimated 20% of its corn crop to produce five billion gallons of ethanol and figure is projected to double again over the next two years.

Mr Gordon Brown, the British Prime Minister, has called for an examination of the links between biofuels and food prices. Japan is urging the world to rethink the use of biofuels. Japan has pledged \$100m (64m, £50m) in emergency food aid over the next three months. But Japanese officials say that, as well as tackling the short term causes, G8 leaders should also address long term causes of food shortages. Tokyo is concerned that the increasing use of biofuels could be one of the factors behind rising crop prices.

Michael Barnier, France's agricultural minister, while defending his own country's support for biofuels, criticised the US and Brazil for unilaterally stepping up production. The US government has been defending its support for biofuels. The administration acknowledges there is a limit to how much corn can be diverted for use in biofuels, but sees "first generation" fuels such as corn based ethanol as a way to develop the industry.

The United Nations' Food and Agriculture Organisation estimates biofuels have contributed to about 10 per cent of the current food price rise. It argues that the surge of oil prices – through costlier fertiliser and diesel – is having a greater impact on food prices. The FAO considers that biofuels "offer opportunities and risks" as they can contribute to rural income but can also help to drive food prices higher.

Jeff Tschirley, the chairman of the Inter-Departmental Working Group on Bioenergy at FAO in Rome, said: "Biofuel has been made a culprit, but we don't see it as the major [factor] responsible for high food prices." Other organisations such as the International Monetary Fund and International Food Policy Research Institute, the Washington based think-tank, have estimated biofuel's contribution to current higher food prices at 20-30 per cent.

Biofuels have long been considered a "greener" alternative to fossil fuels. The environmental benefits though are not as great as originally expected. "There are good biofuels and bad biofuels," warns Sir David King,

former chief scientific adviser to the British government. Some result in savings in greenhouse gases, some do not.

Until recently, biofuels were the sacred cow and enthusiastically embraced by all environmental groups. In 2004, a group including Friends of the Earth, WWF and the Royal Society for the Protection of Birds urged the government to “encourage the use of biofuels”. Today, these groups want governments to abandon biofuels. The turnaround reflects concerns over the effect on food prices and the realisation that many biofuels are much less green than they appear. The analysis of food prices shows biofuels such as ethanol are not the only reason, or even the main reason, that food prices are rising. Australia, the world’s wheat granary, has been reeling under an unusual drought for the past eight years, the longest spell that the country has faced in the last two centuries. The International Monetary Fund thinks the use of crops such as corn for biofuels account for only about 20 per cent of the rise in prices over the past couple of years; other estimates suggest the effect is even smaller.

Clearly we have moved into an era, in which food prices and fuel prices are linked much more closely than ever before. Fertile land has suddenly become a prime commodity. Farms are competing with oil wells as destination for investment. Hedge funds and investment banks are swapping their Gucci boots with gumboots as they bet on rising food prices by buying farms. The realisation has led some environmental groups including Friends of the Earth, who were among biofuels’ biggest cheerleaders only a few years ago – to urge policymakers to stop use of land for biofuels.

Politicians including Mr Gordon Brown, the prime minister of UK, have supported these concerns by calling for a rethink of biofuels policy. Targets for the EU to meet 10 per cent of its fuel demand from biofuels by 2020 and for the US to have 36bn gallons of “renewable” fuels in its consumption by 2022 are at risk.

Putting a sudden brake on the expansion of biofuels is not the right choice. Cutting biofuels production could make food inflation even worse. Higher oil prices will push up the prices of fertiliser and transport, biggest components of agricultural costs and put food beyond the reach of poor.

At \$120, the oil price has almost doubled in the past year and is the main culprit for the rising prices. Gasoline prices would have been 15% higher today but for the increase in the production of bio-fuels over the past one year. What we need is an objective evaluation of competing priorities for land use. The fact is we need both fuel and food. Both are complimentary to each other. Food prices will go up if there isn’t enough fuel. At the same time we do not want billions of poor to be held to ransom by the automobile using middle classes. Lester Brown, president of the Earth Policy Institute, warns of a coming “epic competition between 800 million people with automobiles and the two billion poorest people” for whom nourishment will be out of reach. He predicts that food shortages and food price inflation will lead to famines, starvation and riots.

Biofuels last year contributed about 1.3 per cent of world oil supplies: a small proportion, but still more than Indonesia, one of the earliest members of Opec, the oil producers’ cartel. In the debate on fuel versus food what is not recognised that most of the agricultural land used in US and Brazil for ethanol is meant for corn which is not used as human food but animal feed. According to Bruce Date, the ethanol expert of Michigan State University, “we could feed the country’s (America’s) population with 25 million acres of farmland, and currently have 500 million acres. Most of our agricultural land is being used to grow animal feed.” About 76% of the corn consumed in the US is used as animal feed. America exports 20% of its corn. Two-thirds of these corn exports go to 28 OECD countries, where they feed animals. So the issue is life style changes to reduce consumption of meats.

The current food problem can certainly be eased if US and Europe can open their market to sugar cane based ethanol. As the research scientist and energy expert, Dr Jose Goldemberg, has pointed out, “the potential for producing food in conjunction with sugarcane appears to be larger than expected and should be explored further.” Brazil has the potential for huge growth in ethanol production on land used as pastures where the impact of expansion on either food supply or deforestation would be minimum.

There needs to be increase in R & D of renewable energy sources. A study by the Michigan State University shows that ethanol can be produced from the corn plant leaving kernel for human consumption. An enzyme from cow's guts that allows a cow to digest grasses and other plants, can be used to turn other plant fibres into simple sugars. These simple sugars can be used to produce ethanol to power cars and trucks, said Michigan State University researchers, who conducted the study.

Traditionally, only the kernel of corn plants have been used to make ethanol, but the new discovery will allow the entire corn plant to be used, so more fuel can be produced at far lower cost. The researchers, led by Mariam Sticklen, inserted the enzyme from a bacterium in the cow's gut into a corn plant, triggering the ethanol-making process without having to use extremely expensive synthetic chemicals. "It will save money in ethanol production," Sticklen said. "Without it they can't convert the waste into ethanol without buying enzymes—which is expensive."

There is a huge potential in moving to the second generation biofuels such as cellulosic ethanol. This requires no land. This can be produced from agricultural waste and does not compete with food supplies. It is estimated that India has 600 ton of agricultural waste which has a potential to produce enough cellulosic ethanol to generate 80,000 megawatts of electricity, equivalent to 60% of current production. This not only provides energy security but also helps alleviating poverty by generating 30m jobs in rural areas.

There are no easy solutions to combat climate change. But piecemeal approaches do more harm than good as we have seen in our incoherent policies on food and fuel. There can be no question of land that can cultivate crop being used for fuel regardless of its contribution in energy security. But investments in development of technologies such as cellulosic ethanol and solar energy can relieve the problem to a great degree and ultimately provide answer for energy independence. We have to recognise that all our attempts for energy independence are doomed to fail unless we can make changes to our life styles and the economic growth model. We have to minimise the intensity of energy usage. Good news is this can be done without affecting our standard of living. We have to seriously review the intensity of material usage and our transportation requirements. We have to minimise the use of material in our lifestyles and think of ways to avoid transportation. We have to price the natural capital and use technology to radically increase the productivity of natural resources, opt for organic living, adopt zero waste and use market mechanisms to punish polluters.

The problem lies in the acquisitive character of the current growth model. This not only triggers climate change but also results in Afluenza, an emotional disorder caused by envious greed described by Oliver James in his book by the same name. The question is what can business do to replace this model by one that creates enjoyment through experience without causing environmental damage. A whole lot of companies like Disneyworld and Nintendo are creating enormous wealth by letting customers have fun. Nintendo have shown an increase of 60% in profit while high street sales are going down. Daniel Kahneman, a psychologist at Princeton University (Nobel 2002) reckons people cherish experiences over commodities. People love 'doing' than 'having'. The key question is "Can we turn this economy from an acquisitional to experiential mode?"

One of the tragedies of our lives is the tyranny of 'either/or'. We are always told we can either have quality or quantity, either profit or growth, either work or play. Now we are told we can have either food or fuel. The truth is we need both.

***Dr Madhav Mehra is President of World Council for Corporate Governance, UK**

June 2008

Climate Change –

An opportunity that knocks after a million years

Oscar Wilde is supposed to have defined a pessimist as someone who complains of noise when opportunity knocks. Rocketing oil prices should be music to the ears of climate change industry. It has brought a sense of urgency to even a country like India, thus far insensitive to the impact of climate change. It has accelerated the pace in developing alternative energy options. There is now a sudden awareness of opportunities in harnessing renewable energy. Solar energy has been found to be the most promising of all alternative options. India has so much of it. If only 2% of the land area were to be used to harvest energy from sustainable the power generated will meet our entire energy requirement. Yet it was starved of investment in R & D thus making it an expensive option. It has now become a hot bed of innovation. Costs are falling, making solar energy accessible to common man. India has allocated Rs. 600 crores in the 11th plan for R & D in photovoltaic technology and also set up a Solar Energy Commission with a spend of \$10 billion.

It was Einstein who said that the significant problems that we face today cannot be solved at the same level of thinking as we created them. Once we are able to adopt new perspective the global warming turns an opportunity and the kind of reductions in CO₂ that governments are bickering about look infinitesimal. Telecommuting is one such solution. Anyone who commutes to office in any of the hundreds of metropolitan towns around the world knows the huge quantities of GHG formed through the traffic jams caused by commuting rush in the morning and evening. Why, with enormous advances in wireless technology, governments all over the world are not providing a free wifi service in every habitat to enable employees to telecommute? Why corporations are not staggering office hours and introducing flexi time? This would improve productivity, help housewives to join the work force & stop traffic jams. Companies should subsidise purchase of computers for the staff to encourage and enable them to work from home or local hubs instead of commuting.

Winning companies are already getting their staff to telecommute. This step alone can cut down the CO₂ way below the requirements of Kyoto. Fight against climate change simply needs a will to transform business as usual. Benefits are far too profound to make the change worth the pain.

Climate change is an opportunity similar to one this planet experienced millions of years ago when extreme drought forced hominids to adapt to new environment and brought humans with larger brains into being. According to the projections made by futurist-physicist Michio Kaku, oil prices will keep rising globally and are forecast to reach \$200 per barrel. At the same time the price of solar – hydrogen power will keep falling thus ushering in a solar hydrogen age.

The failure of Bali negotiations shows that governments with diverse constituencies are ill equipped to solve problems so cataclysmic and so urgent as climate change. That climate change is real, catastrophic and man made is indisputable. That it is unjust in the severity of its consequences is irrefutable. Billions living in South who have never switched on an electric bulb face the worst consequences while North which has caused climate change and controls vast cold deserts may even be better off in the short run with global warming. The overriding issue therefore is of the impact of climate change on the sharpening inequalities which already pose the greatest threat to security. Poverty and hardship seem more insidious when juxtaposed against abundance and opulent consumption. People can stand poverty but not injustice. It is the perception of this injustice that becomes the breeding ground for all forms of terrorism. Even more so in this connected world.

None realises the importance of stability and security more than the global business. Business is the greatest beneficiary of globalisation. It understands the power of renewable technologies such as the wind power and solar energy to redress the global imbalances. It understands the importance of balanced scorecard to serve different constituencies – combat climate change, alleviate poverty and create value for company. Business is more adept to a holistic approach to adopt multiple agenda by tapping the formidable power of technology. It realises that oil supplies are limited. Though forecasts of oil supplies are dodgy because oil supplies, oil exploration, oil extraction or oil reserves have never been subjected to audit, experts believe oil production may peak this decade itself. At the same time energy requirements are rising with a vengeance. It sees the huge potential in serving the needs of hundreds of millions of people who are yet to switch on power.

The social responsibility of the business even from the days beyond Milton Friedman and Adam Smith has been to make money unabashedly. In the knowledge economy of today the route for making money has changed. It now passes through social agenda and environmental uplift. The corporate social responsibility today has turned out to be corporate business opportunity. Businesses are burning midnight oil in proving who is socially or environmentally more responsible. While governments are struggling to cut CO2 by mere 7% below 1990 levels, some smart companies have achieved spectacular results in their bid to drive a low cost economy.

Lee Scott, CEO of Wal-Mart and Stuart Rose, CEO of Marks and Spencer both admit that they started their sustainability drive as “a defensive strategy”, but it has turned out a cash cow creating value for both customers & company in an unprecedented way while protecting environment.

HSBC bank & ITC claim they have offset their carbon impact and become carbon neutral. M & S claims they will soon become zero waste and have grossed a billion pound profit on the back of their sustainability, “Fairtrade”, organic food, and zero waste slogan “Just as our sandwiches disappear in your mouth so does our packaging.”

DuPont claims to have reduced GHG emission by 50%. Dow Corning has made \$1 billion through eco-embedded innovations. Ford has boosted productivity and saved money by rebuilding its River Rouge plant in Detroit ecologically, installing skylights and a ‘living roof’ that reduces toxins. Several companies have followed suit. Genzyme Corporation uses waste steam for heating. The New York Jets stadium was designed to use solar cells and wind turbines to reduce energy. It now sells excess energy to the city’s electrical grid. UPS & FedEx are equipping vans with hybrid and fuel cell engines to reduce fuel costs & pollutants. Starbucks claims it saved \$36 million in 2001 through CSR and sustainability projects that helped keep employees loyal and cut down turnover costs.

Nine leading UK companies are signing up for carbon footprinting standards to address global warming in partnership with Carbon Trust, DEFRA and British Standards Institution. These include Cadbury Schweppes, Coca-Cola, The Cooperative Group, Halifax, Kimberly Clerks, Muller Dairy and Scottish and Newcastle – producer of Fosters Lager and Bulmers Original Cider. They will work with Carbon Trust to explore the best way to measure and communicate the carbon impact of their products.

The evidence shows that industry is aggressively responding to environmental challenges with a wave of innovations in alternative energy. Brazil is already meeting 40% of its transportation requirements from ethanol. Bio fuels can be produced without sacrificing land for food crops. India’s 600 million tonne agricultural waste can generate equivalent of 80,000 mega watts of electricity, ie 60% of its installed capacity, and empower the rural India by creating 30 million new jobs. Radical advances in energy conservation are taking shape. Hybrid cars, solar panels, windmills, ethanol plants, nuclear fission, desalination, biofuels, organic farming, precision farming and bioengineering are but few examples. Light Emitting Diodes (LEDs) are saving 90% of the energy wasted by incandescent lights. The experts of TechCast project directed by Bill Halal, Professor of Innovation and Technology at George Washington University detail “scores of new fuel cell technologies developed to create H2 directly from biomass. Photosynthesis is offering the prospect of converting sunlight into energy as plants do, at 100% efficiency.

Tidal energy is being harnessed in Manhattan, France, and Nova Scotia. Geothermal energy is producing the first hydrogen economy in Iceland. Cold fusion is being re-examined because of new supporting evidence. Researchers at the University of California are converting the biggest problem in global warming - CO₂ - into oxygen and carbon monoxide, the primary feedstock for plastics and other products. Wind turbines are being developed that ride 10 Km up in the jet stream to capture 100 times as much energy, which is transmitted to Earth on supporting cables. The U.S. military and India are studying the use of solar satellites for producing energy.

The trend is unmistakable. California Edison increased its use of renewables from 1% in 1985 to almost 30% today, and California now requires 20% of its energy to be renewable by 2017. Maine now derives 30% of its energy from hydroelectric plants and other renewables. Hawaii, and other states aim to produce 20% of all energy from renewables by 2020. The U.S. DoE thinks renewables will reach 28% by 2030, and the EU expects renewables to reach 22% of energy use by 2010."

Melting of glaciers is reducing the water supply for future generations. Water promises to be in the 21st century what oil was in the 20th century. Gangotri glacier the font that supplies fresh water to millions in India is receding by 23 meters every year. Desalination technologies will change the equation. According to TechCast studies, innovations in desalination have brought down the overall desalination costs from \$20 per gallon in 1950, to \$6 per gallon in 1960. The cost is now approaching 1 cent per gallon. Ovation Products claims it can distill water contaminated with anything into pure drinking water for 1 cent per gallon.

New business models are emerging which are material efficient and service based. The classic example is Interface Corporation, a \$ 1.1 billion company that provides "carpet service" rather than selling carpets. They learnt to recycle carpets and found recycling makes carpets last four times longer and uses 40% less fabric while reducing the amount of replaced carpeting by 80%. This resulted in 35 fold reduction in overall use of materials. Ray Anderson the CEO says: "Sustainability doesn't cost. It pays. Our costs are down. Our products are the best they have ever been. Our people are motivated by a shared higher purpose. And the goodwill in the marketplace is astonishing. Doesn't it feel good to have this kind of commitment made by the company that you are part of? Don't you feel proud?"

Smart companies are not following piecemeal approaches to climate change. They realise that modern technology can give multiple benefits. The intimate interplay between a DNA molecule, the IT power, atomic matter, bioengineering has driven commercial innovation through the roof. Bridgestone, the Japanese tyre company no longer sells tyres in Europe. They charge customers on "pay as you use" basis. Tyres have sensors to track their usage. So instead of proliferating models, the company focuses on improving the durability of tyres. Because customers pay on usage, even the poor can afford thus the company enhances its market, improves its sales and boosts social inclusion. Lots of other companies operate similarly multiple agenda that improve their bottomline, alleviate poverty and save the planet.

Corporations are greening their businesses at an astronomical pace. Greentech could be the greatest business opportunity of 21st century. Cleaner energy companies that attract 1% of venture capital before 1999 are now getting 8% of all investment. The world market for pollution control was \$500 billion in 2000. It is expected to rise to \$10 trillion in 2020, larger than automobiles, health care and defence.

Ever since the collapse of the dotcom bubble, investors have been searching for a new El Dorado. Climate change could be the exciting new frontier with dramatic potential. In India Suzlon, a lacklustre company so far, has generated Rs 13700 crores for its promoter Tulsi Tanti through a recent IPO. Wind-turbine companies which had mini-busts in 2000 and 2004 are roaring today.

Investor interest is switching to companies that develop the enzymes which break down plant matter and turn it into fuel. "Novozymes, a Danish company, was considered a boring old specialty chemicals company until the enzymes operation was recognized," says Ronnie Lim, head of sustainable investments research at Morley, a fund management group.

The wind market today is the most developed. Three of the four largest environmental companies by market value (Suzlon from India, Gamesa from Spain and Vestas from Denmark) are wind groups. According to Impax, Turbine manufacturers should prosper in 2007, says Bruce Jenkyn-Jones, Impax's director of investments; 28 different countries are growing wind capacity, which means that turbines are sold out to 2009. So manufacturers can push through price increase. Wind turbines will, from now onwards be subject to only incremental improvements: they will become a bit more efficient, a bit cheaper to install, and a bit cheaper to build.

Solar, on the other hand, is ripe for breakthroughs. The material which forms the basis of the vast majority of today's solar cells, silicon is expensive and cumbersome. There is no compelling reason why new materials of a tenth of a twentieth the price of silicon could not be used. Eventually thin-film technology will prove a cheaper replacement. However, there may be other solar opportunities through these cell technologies. Stephen Mahon of the Low Carbon Initiative, which recently launched a £44.5m (\$82.5 m) environmental fund, says it is investing in Heliodynamics, a company which use mirrors to focus the sun's rays and thus increase the power generated.

But nanotech can provide plastic solar cells at \$0.20/watt and increase efficiency. Nanosolar Company is mass producing solar cells at far less cost by simply printing them, and expects to increase the global supply 20-fold. The world's largest solar power plant, located in the Mojave desert, is 30% efficient. The CEO says that "11 square miles could produce as much energy as Hoover Dam." The consensus is that costs will become competitive with other energy sources about 2012 to 2015, and some experts estimate solar and wind power will reach 10% of U.S. energy by 2013.

Nuclear fission produces no pollution, has a sound safety record, and compares with oil on cost. New designs like the pebble bed reactor are immune to meltdown, and waste can be stored safely if coated in glass or socked away in stable mountains for 200,000 years. A "fast breeder" design recycles spent fuel to reduce radioactive waste from 95% to 1% of the fuel used. Worldwide, the number of nuclear power plants is expected to grow from 435 today to 600 by 2010.

Organic farming is making the planet and humans both healthier. It uses less resources, improves the soil, reduces drought and erosion and improves profit through higher yield. Studies also show that organic foods produced a "dramatic and immediate" drop of pesticide levels in the bodies of children. "Free range" chicken, and grain-fed beef have less fat, less cholesterol, less vitamin A & Omega Acid compared to 'factory raised' chicken or animals. Vegetables also lose nutrients when grown with chemicals. Surveys show 90% of the public favors organic produce.

Innovations in precision farming are unfolding new opportunities of profits for companies with improved soil productivity, healthier people and healthier planet. It involves the computerized control of irrigation, seed distribution, fertilizer, and pesticides to suit variations in land identified using GPS and geographic information systems. Twenty percent of farmers in the U.S. are adopting these practices because PF reduces the amount of costly chemicals needed, raises yields, and protects the environment. A farm equipment manufacturer said, "In 10 years, every farmer will use this technology."

The most controversial area is that of carbon credits, which requires energy producers to buy permits to emit greenhouse gases. In 2006 the European Union's emissions-trading scheme was crippled by the over-allocation of permits by member countries, prompting the price to plunge by two-thirds. But James Cameron, a founder of Climate Change, is optimistic. He has raised an \$830 m fund to invest in carbon trading and says the scheme "is the best chance we have of reducing large amounts of greenhouse gases at relatively low cost".

The auto sector has been the most lethargic in innovation due to the resistance from incumbents. Each day a modern car burns fuel derived from 100 times its weight in ancient plants; yet a mere 2% of that fuel moves the driver. Tripled-efficiency, ultra light petrol-hybrid SUVs designed in 2000, are paying back in one year at European and Japanese fuel prices or two years at America's much cheaper pump prices. This year

the Automotive X Prize is starting to move such designs to market just in America, they will ultimately save 8m barrels of oil a day – equivalent to finding a new, secure and inexhaustible Saudi Arabia under Detroit.

Toyota is emerging the leader in superefficient plug-in hybrid cars; electric for short commuters, petrol-hybrid for long trips. This could double the already doubled petrol efficiency of a Prius. It is using technology to make it ultra light so its petrol efficiency redoubles. If it could be biofuelled , the efficiency can be quadrupled thus raising it to 30 times today's norm.

As we multiply our energy needs to power our homes, offices, factories and vehicles for the 8 billion people in the next decade, the innovations in alternative energy will begin to lay visible foundations for a richer, cooler, fairer and safer world. Yet these advances merely reflect the tip of the iceberg of potential of innovations triggered by climate change.

Stabilizing the earth's climate would turn out not costly but profitable in more ways than one. It would unleash a new trajectory of unifying and inclusive growth. People will start questioning our obsessively acquisitional, excessively consumeristic and emotionally destroying model of growth that clutters the planet with proliferation of unneeded products that are dangerous for health and disastrous for ecology. This in turn will release another explosion of innovations and multiply business models of the Interface Corporation of US and Bridgestone of Japan as well as that of Disney which makes huge profits through enhancing enjoyment of experiences. As Daniel Kahneman , the celebrated Nobel economist says people cherish experiences far more than commodities. They love “doing” more than “having”. Business will discover new potential in moving economy from this acquisitional to experiential mode.

As Madonna's recent jaunt to Rajasthan culminating in joy rides on camel's back and discovering the quaint and the unbeaten tracks has confirmed, the wet dreams of rich and famous are not acquisition of masserati objects but go for outlandish experiences that add to their brand of uniqueness – being one and the only one to have done it. With the rise in technology the luxury is becoming commoditised . The growth economies of India, China, Brazil, Russia are adding millions of HNIs (High Network Individuals) and hundreds of billionaires each year. It is no fun for the status conscious to own things that millions of Joneses do. They are looking for lusty experiences which are also emotionally gratifying. Businesses that create such experiences reap the moolah without damaging the planet.

World economy is fueled by 2 billion teenagers whose value system is vastly different from their parents. A study of their shopping behaviour reveals they punish companies with poor record on environment and social issues and reward those who champion these issues. They are the ones who are clanking the tills at Marks and Spencer and Wal-Mart egged by the social and environmental promise of these companies. There never was a better time to be good and make money.

Climate change is an opportunity for social change that we have been waiting for. Its great potential lies in bridging the North South divide by empowering the rural poor. Climate change will revolutionise the fight against poverty and shape the future of business as never before. It will power unprecedented growth through new business models based on low carbon, zero waste and dematerialized growth that emphasizes and enhances the human experience on this planet. A robust response to climate change offers not only the biggest business opportunity of this century but also hope to the world's poor that their misery may soon come to an end.

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Making Capital Markets Work Through Corporate Governance

Over the past few months, as banks, insurers and investment houses cut down their workforce, fears are mounting that conditions are set to deteriorate markedly in capital markets. Lehman Brothers warned recently that spreads on credit default swaps, which track the cost of insuring corporate debt against default, could soon spike beyond the levels seen at the time of the Bear Stearns rescue in March.

The complete loss of risk appetite either in equities or treasuries, the shorter queues at delicatessens and sandwich shops, the gloom-shrouded watering holes and the number of vacant floors in previously bustling buildings are stark reminders of the severest downturn since the crash of 1929.

Just a year ago, UK economy was on top of the world. Banks like Barclays, and stores like Marks and Spencer had generated record profits. Building Societies were flushed with money and touting public for mortgage bonanzas as if there was no tomorrow. The city was crowing about being the world's largest financial capital, thanks to the less stringent listing requirements of the London Stock Exchange. There was a revulsion against Sarbanes Oxley as if it were the kiss of death. It was decimating NYSE and SEC was making cacophonous noises how they were rolling it back. UK was priding itself on its pragmatic and pliable financial regulatory system "comply and explain".

All this has been silenced by the relentless news of doom and gloom everywhere. It all started with the run on the banks like Northern Rock spreading to the fears of crash of the housing market, stagflation and the weakening pound. A country that once stood proudly apart from the rest of Europe, trumpeting its "Third Way" to prosperity, is having serious doubts about its own policies and has started pillorying its own prime minister, at one stage regarded as the best ever British Chancellor of the Exchequer.

The current debacle of capital markets is fuelled by the greed of bankers, financiers institutions and the monied class. The shenanigans that followed the collapse of Bear Stearns showed crass behaviour of market manipulators that have spelt doom of the global free-market capitalism. This has made the debate about the 'overkill' of Sarbanes Oxley Act irrelevant. The irony is we have far too many regulators overlapping in roles and competing with each other to deregulate the financial system in a race to the bottom.

The unique spectacle of impending recession coupled with rising inflation produced by one of the most reckless manipulations of capital markets with the connivance of regulators has catastrophic implications. Billions of dollars in shareholder value has been wiped away. Stunned Bear Stearns shareholders have seen their investments virtually wiped out overnight. The takeover deal with J P Morgan Chase offered \$2.4 a share compared with Bear's \$159 stock price in last April. Questions abound on the buyout. Shareholders, law makers and public at large want answers on how the deal was arranged, and gained government approval and financing, all in a few hours, and seemingly without alternative bidders being canvassed.

While irresponsible subprime lending in the US stock market has played havoc in the global markets, it is the derivatives, a fast growing category of contracts whose value is derived from the underlying value of bonds, stocks and currency futures which has shaken the public confidence in the rising stock market in India.

According to a recent survey, Indian companies may have suffered \$5 billion mark to market losses due to subprime and derivative crises.

That all this should happen despite the draconian Sarbanes Oxley Act points to the abyss reached by the free-market capitalism which displays flagrant disregard of all norms of corporate governance practices and risk management standards which Sarbanes Oxley Act was supposed to uphold.

Insider trading on Wall Street is starting to look as troubling as it was in the time of Ivan Boesky in the 1980s, the head of enforcement at the US Securities and Exchange Commission warned recently. Linda Chatman Thomsen, the SEC's director of enforcement, said she had been "quite dismayed" at the nature of the commission's recent insider dealing actions.

"The tippers and tippees have been in senior positions of trust and confidence," she said. "We are far from low-level employees or people on Main Street." Ms Thomsen expressed concern at the "multiple incidences" of insider trading and cases involving couples who were both professionals. Recently a former Ernst & Young partner was charged with allegedly passing insider trading information to an investment banker friend ahead of seven deals involving the accounting firm's clients. In one of the most high-profile cases recently, 13 people, including a Morgan Stanley compliance officer and a UBS executive director, were charged in relation to an insider trading scheme.

The rules of the game in the financial markets are set up solely to benefit the financiers whether in London, New York or Hong Kong. Globalisation today appears to be run in the interest of big monied class which has western governments in its thrall. As Will Hutton says in Guardian: "Interpol should make arrests in New York, London, Tokyo, Beijing, Frankfurt and Paris, starting with all the executives in the credit-rating agencies who blithely ranked the debt as creditworthy in exchange for fat fees and freebies from the very banks who were making the absurd loans. Governments should bring suits against the executives involved, the repository of vast personal wealth, to help repair the hole in private and public balance sheets."

The problem is that western governments playing hostage to the big financiers fail to regulate them despite warnings. Markets became jittery only because following the subprime lending crisis nobody knew who had lost what. Market valuation of CDOs (Collateral Debt Obligations and CLOs (Collateralized Loan Obligations) are presumptive. The exposures are not objectively validated. Banks behind the subprime loans had sold the debt to other banks and specialized funds known as CLOs and hedge funds exposing them to billions of dollars of debt when mortgages defaulted.

It is therefore, naïve to suggest that self-regulation can work in the markets. In an interview to Wall Street Journal, Eliot Spitzer, the much defamed former Attorney General of New York, said: "The honour code among CEOs didn't work. Board oversight didn't work. Self-regulation was a failure". Even a staunch defender of free capital markets as Joseph Ackerman, Chief Executive of Deutsche Bank says " I no longer believe in the market's self-healing powers."

It is good news that the Bush administration has finally woken up and recognized the crisis that Alan Greenspan calls the "most wrenching since the end of the second world war". The Treasury department is trying to undo the damage by confronting the credit crisis and putting brakes on free for all market. It is proposing wholesale changes in the US financial systems and bringing back financial regulation which it had discarded due to the pressure from greedy financiers. Under the current hodgepodge, institutions that take deposits and are federally insured face multiple regulatory bodies. By contrasts, hedge funds, private equity firms and investment banks endure substantially less regulation. The new regulation seeks to make sense of the mishmash of overlapping oversight in which an alphabet-soup roster of agencies regulates banks, thrifts and credit unions.

Hank Paulson, the Treasury Secretary is contemplating new powers to the Federal Reserve so that the central bank serves as the system's overarching protector of stability & shareholders interest. The proposals would abolish agencies such as the Office of Thrift Supervision and the Commodity Futures Trading Commission, shifting their responsibilities to other federal institutions. These changes will represent the most

sweeping overhaul of financial regulation since the Great Depression of the 1930s. Soon the Draghi Commission within the Financial Stability Forum will report its conclusions and proposals for reform of the financial system to the G7 Finance Ministers.

We need to question the performance of the financial system against the time honoured principles of corporate governance of accountability, equity, integrity, transparency and responsibility. The crucial question in these financial failures is the lack of accountability. The system of compensation of bankers and operators in the financial system itself is flawed. According to Nouriel Roubini, Economics Professor at the New York University's Stern Business School, the compensation system is a source of moral hazard in the form of gambling for redemption. He enumerates ten fundamental issues that led to the melt down.

Since a large fraction of executive compensation is in the form of bonuses tied to short-term profits and since such bonuses are one-sided (positive in good times and, at most zero, when returns are poor) managers/bankers/traders have a huge incentive to take larger risks than warranted by the goal of shareholders' value maximisation. The potential solutions to this gambling for redemption bias can be changed by restricting the sale for a number of years and tying it up with the individual's quality of lending/investment decisions.

Such is the power of human greed and the complexity of capital markets that this restriction on sale did not prevent Bear Stearns, 30% of which is owned by its own employees, from making reckless investment that eventually made it insolvent.

It has become fashionable for most regulatory and supervisory regimes to move in the direction of emphasizing self-regulation and market discipline rather than rigid regulations. One of the arguments in favor of this market discipline approach is that financial innovation is always one or more steps ahead of regulation; thus, one needs to design a regime that does not rely on rigid rules that would kill financial innovation. But experience has shown that markets cannot be relied upon in a world where bankers are improperly compensated, where agency problems lead to poor monitoring of lending, where a flawed transfer of credit risk to those least able to understand it and manage it occurred, and where regulatory arbitrage was widespread and rampant. It is because of this that even Paul Volker, a doyen of central bankers commends tighter regulation in the interest of the industry itself.

The current securitisation model is packed with greed, opacity and irresponsibility. It reduces the incentive for the originator of the claims to monitor the creditworthiness of the borrower. Every intermediary in the chain is interested only in its fee and eventually transfers the credit risk to those least able to understand it and bear it.

The mortgage broker, the home appraiser, the bank originating the mortgages and repackaging them into MBSs (Market Backed Securities), the investment bank repackaging the MBSs into CDOs, CDOs of CDOs and even CDOcubed, the credit rating agencies giving their AAA blessing to such toxic instruments: each of these intermediaries was earning income from charging fees for their step of the mortgage intermediation process and transferring the credit risk down the line to lay investors. In this maze of CDOs no one knew the level of risk at each stage.

There are fundamental accounting issues on how to value securities, especially in periods of market volatility and illiquidity when the fundamental long term value of the asset differs from its market price. The current "fair value" approach to valuation stresses the use of mark-to-market valuation where, as much as possible, market prices should be used to value assets, whether they are illiquid or not.

Financial markets have become less transparent and more opaque in many different dimensions. The development of news exotic and illiquid financial instruments that are hard to value and price; the development of increasingly complex derivative instruments; the fact that many of these instruments trade over the counter rather than in an exchange; the fact that there is little information and disclosure about such instruments and who is holding them; the fact that many new financial institutions are opaque and with little or no regulation (hedge funds, private equity, SIV and other off-balance sheet special purpose

vehicles) have all contributed to a lack of financial market transparency and increased opacity of such markets.

The absolute lack of supervision on the non-banking financial institutions like Bear Stearns and hedge funds has the real cause of the havoc. By their very nature the banks borrow in the short term and in liquid ways whereas they lend in the long term and in illiquid ways. There is therefore need for proper tab on their lending. In the case of banks the risk of runs is significantly prevented by the existence of deposit insurance and by the lender of last resort support that the central bank can provide to depository institutions. Publicly provided deposit insurance is generally not warranted for non-bank financial institutions as the protection of small investors/depositors - who don't have the expertise to monitor the lending/investment decisions of banks - is not generally an issue for such non banks. But as the recent Bear Stearns episode as well as the run on and collapse of other members of the shadow financial system suggest bank like runs on non-banks can occur and are likely to occur more often if such institutions do not properly. The absolute lack of supervision on the non-banking financial institutions like Bear Stearns and hedge funds has proved to be the primary cause of the havoc.

The Fed's action to bail out Bear Stearns at a cost of \$30 billion shows the importance of these non-banking financial entities. How could they be allowed to run amok without controls in the first place? It is all the more reason that they should be exposed to at least the same level scrutiny as the banks. Such firms should be asked to fully disclose to their supervisors and investors the liquidity and other risks that it is undertaking and required to reduce its liquidity risk with a variety of tools that ensure a greater liquidity buffer.

Basel II agreement has shown its serious flaws: capital adequacy ratios that are pro-cyclical and thus inducing credit booms in good times and credit busts in bad times; low emphasis on the importance of liquidity risk management; excessively low capital requirements given the serious financial risks faced by banks; excessive reliance on internal risk management models; excessive role given to the rating agencies and their ratings. These are serious shortcomings of the new capital regime for large internationally active banks and depository institutions.

When a crisis of confidence of the dimensions we have witnessed takes place, what is crucial is how fast we can extinguish the fire. In this context UK's model of having an FSA, where all financial policies – for banks, securities firms, other financial institutions, insurance companies, etc. – are under one umbrella, is considered superior to an increasing number of regulators at the federal and state level as in US.

Finally in a world of financial mobility, mobile capital, instant transferability, globalization and financial intermediation, capital will always have a tendency to move to more lightly regulated shore. Reforms of financial regulation and supervision cannot be effectively carried out only at the national level. Indeed, the recent US debate on reforming capital markets was driven – before the current market turmoil – by the concerns that a tighter regulatory approach in the U.S. (say the Sarbanes-Oxley legislation) was leading to a competitive slippage of New York relative to London in the provision of financial services. There is therefore a need to encourage cross-national fora and develop a global financial monitoring system for stronger coordination to avoid a race to the bottom of financial regulation.

The above points based on an excellent research paper of Professor Nouriel Roubini's Ten Fundamental Issues in Reforming Financial Regulation and Supervision in a World of Financial Innovation and Globalisation show how the current crisis is primarily due to the failure of corporate governance in the financial system. It begs the question how could the boards of these institutions, supposed to monitor performances, missed such egregious failures? Charles Elson, who sits on several boards and heads the Corporate Governance Centre at the University of Delaware asks: "Where exactly were they when all this was going on?" The question is beginning to be asked by shareholders and employees whose lives have been destroyed by these market manipulators.

At the heart of the matter is whether the corporate governance infrastructure, built over the decades to provide checks and balances to ever more powerful chief executives, has been exposed as woefully inadequate by recent events. As one former senior Wall Street executive puts it: "If, as it appears clear,

boards were asleep at the switch, then there is something fundamentally wrong with the system of controls we have." Hence the the theme of the forthcoming 9th International Conference on Corporate Governance scheduled in London on 18/19 September is aptly chosen as "Making Capital Markets Work Through Corporate Governance."

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The Role of Directors During the Downturn

In its Annual report on economy, the International Bank for Settlement says "The current market turmoil in the world's main financial centres is without precedent in the postwar period. With a significant risk of recession in the US, compounded by sharply rising inflation in many countries, fears are building that the global economy might be at some kind of tipping point. These fears are not ground".

In its lead article on "Britain's sinking economy", the Economist says "It is going to get nasty; exactly how bad depends on Bank of England and Gordon Brown". It all started with the run on the banks like Northern Rock spreading to the fears of crash of the housing market, stagflation and the weakening pound. A country that once stood proudly apart from the rest of Europe, trumpeting its "Third Way" to prosperity, is having serious doubts about its own policies and has started pillorying its own prime minister, at one stage regarded as the best ever British Chancellor of the Exchequer.

The doom and gloom is so widespread that both the developed and emerging markets are suffering from it. Increasing inflation and high cost of debt are killing the companies. Most companies have started cost cutting programmes. Ford has stopped production of their suvs and is moving full throttle to smaller cars. Toyota has unveiled its remodeled Crown Sedan under its latest cost cutting drive to effect savings of \$2.8 billion.

These are tougher times for company boards. More so because only last year it seemed that good times were going to last for ever. Business seemed to have entered the best of all possible worlds - low inflation and high growth were powered by advanced technology and inexhaustible markets that were generating, and would go on generating, unprecedented rises in productivity. Banks like Barclays, and stores like Marks and Spencer had generated record profits. Building societies were flushed with money and touting public for mortgage bonanzas as if there was no tomorrow. The city was crowing about being the world's largest financial capital, thanks to the less stringent listing requirements of the London Stock Exchange. There was a revulsion against Sarbanes Oxley as if it were the kiss of death. It was decimating NYSE and SEC was making cacophonous noises how they were rolling it back. UK was priding itself on its pragmatic and pliable financial regulatory system "comply and explain" unmindful of the excesses of the hedge funds.

"How," asks the report of the International Bank for Settlement, "could a huge shadow banking system emerge without provoking clear statements of official concern?" How, indeed could lending frenzy be so widespread that even conventional banks hooked on toxic substances such as MBSs and CDOs were lending without a thought about the solvency of the borrowers. The result is that even after the blighting of the money markets for almost a year none knows who owes whom and what.

It begs the question how could the boards of these institutions, supposed to monitor performances, missed such egregious failures? Charles Elson, who sits on several boards and heads the Corporate Governance Centre at the University of Delaware asks: "Where exactly were they when all this was going on?" The question is beginning to be asked by shareholders and employees whose lives have been destroyed by these market manipulators.

Success is its own enemy

One of the laws of old economy is that success breeds excess. Unless the excesses are corrected, the success turns its own enemy. The longer the boom, and the larger the bubble, the sharper and deeper is the eventual fall. Continued high profits and sales blind management – the classic IBM syndrome - to the fierce reality: their underlying strengths are diminishing. When the impact of this deterioration fully breaks

through, it's usually too late to undo the damage. Abundant cash flow and high morale of peak performance turns into tightening and downsizing of the finances in a forlorn effort to restore company fortunes leading the company to further doom and gloom and an all around demoralisation.

Britain's is a classic example of success followed by hubris followed by complacency and atrophy. Economic growth was buoyed in recent years as the City thrived on the back of all the clever financial deals that have now got unstuck. The excessive hedge fund operations made it vulnerable to an extended banking crisis. The era of GDP growth supercharged by borrowing could not last. Companies who grew rich on cheap borrowed money will have to learn new skills to survive.

The current debacle of capital markets despite regulation

The current debacle of capital markets is fuelled by the greed of bankers, financial institutions and the monied class. The shenanigans that followed the collapse of Bear Stearns showed crass behaviour of market manipulators that have spelt doom of the global free-market capitalism. This has made the debate about easing regulation following the 'overkill' of Sarbanes Oxley Act irrelevant. It has made the attempts of far too many regulators competing with each other to deregulate the financial system in a race to the bottom farcical.

The unique spectacle of impending recession coupled with rising inflation produced by one of the most reckless manipulations of capital markets with the connivance of regulators has catastrophic implications. Billions of dollars in shareholder value has been wiped away. Stunned Bear Stearns shareholders have seen their investments virtually wiped out overnight. The takeover deal with J P Morgan Chase offered \$2.4 a share compared with Bear's \$159 stock price in April 2007.

Questions abound on the buyout. Shareholders, law makers and public at large want answers on how the deal was arranged, and gained government approval and financing, all in a few hours, and seemingly without alternative bidders being canvassed.

Insider trading on Wall Street is starting to look as troubling as it was in the time of Ivan Bosky in the 1980s, the head of enforcement at the US Securities and Exchange Commission warned recently. Linda Chatman Thomsen, the SEC's director of enforcement, said she had been "quite dismayed" at the nature of the commission's recent insider dealing actions.

"The tippers and tippees have been in senior positions of trust and confidence," she said. "We are far from low-level employees or people on Main Street." Ms Thomsen expressed concern at the "multiple incidences" of insider trading and cases involving couples who were both professionals. Recently a former Ernst & Young partner was charged with allegedly passing insider trading information to an investment banker friend ahead of seven deals involving the accounting firm's clients. In one of the most high-profile cases recently, 13 people, including a Morgan Stanley compliance officer and a UBS executive director, were charged in relation to an insider trading scheme.

That all this should happen despite the draconian Sarbanes Oxley Act points to the abyss reached by the free-market capitalism and the flagrant disregard of all norms of corporate governance practices and risk management standards.

Beating the Competition in the Economy of Surprise

The basic reason for this credit crunch is that our financial analysts could not see the change coming and never made contingency plans. They did not learn any lesson from Enron, WorldCom or Tyco. They never considered the impact of Iraq war, the increasing annual deficits of US putting steady pressure on the dollar, the jingoism of George Bush, impact of climate change and increasing energy demands of the emerging economic giants – China and India. So drunk were they on their fancy financial instruments that they did not exercise even the basic caution of hedging their bets about oil going up, commodities soaring and dollar going down. They ignored the basic character of today's economy. The result is that the perpetrators of these excesses became the victims of their own crimes. As a consequence the heads of five of the world's biggest investment funds lost \$2.2 billion of their personal wealth since the peak of 2007. The wealth of James Cayne, the CEO of Bear Stearn reduced to about 5%. Richard Fuld of Lehman Brothers lost about 80%. The shares of John Mack of Morgan Stanley and of John Thain of Merrill Lynch lost by half and Lloyd Blankfein lost about 30% of his wealth.

We are living today in the economy of surprise and contradictions. The headlines in today's paper say "SBI beats forecast with profit growth of 15% and ICICI net dips". A sleeping elephant rises despite financial gloom and a bank known for its spectacular efficiency and customer service fails the expectations of its shareholders.

In the past companies have been using following management tricks to beat the competition:

- flat structures and bottom-up decision-making;
- strategic alliances with suppliers, customers and competitors;
- outsourcing and direct participation in emerging markets
- establishing multi-media 'contact centres'
- interaction over active websites, blogs and e-mail
- optimising the efficiency of the entire, end-to-end business system

These strategies are increasingly reaping the law of diminishing returns because the competitors have commoditised these initiatives. Survival today depends on the speed of surprises a company can create for the competition in this economy of change and surprise? The time for 10% staff cuts and 20% quality improvement is past. In this wrenching and ruthless change the only competitive space comes from using the violent and accelerating change viewed by opponents as a problem as grist to power your engine of innovation.

In this warpspeed economy the directors – independent or executive - can no longer stay as silent spectators or watchdogs. They have too much to lose. Inaction could land them in jail. Society's expectations of directors contribution is way beyond their potential. They expect directors to deliver exceptional output or become output themselves. To fulfill their expected role directors have to become transformational leaders. They have to be wise enough to realise the utter futility of remaining ineffective independent directors. Make no mistake. All these banks and financial institutions went down despite having brilliant independent directors just as ENRON and Worldcom did. It is time we realised the limitations of independent directors. It has been established that independent directors who don't have a stake in the company whose board they adorn, are not the most effective watchdogs. Board meetings are often so brief and infrequent they have little chance to create an impact of any sort.

The irony is that these firms who have been consigned to the dustbins of history also had the best management advisors. McKinsey continues to be the consultants to 75% of the world's top 200 companies. No wonder these companies become over managed and under led. We want to turn every director into a leader. We want them to become proactive enough to get themselves elected in key committees such as the audit or remuneration committee. This means they have to re-create themselves. This has to become an inside out job. They have to lead from the front. This needs re-training. Just as Gandhi did. Gandhi, a master communicator, admits to not being able to utter a word at his first encounter with a small cause court judge. But he said later: "I persevered and I persevered and I persevered. I can now give a certificate to myself that a thoughtless word has neither escaped my pen nor my tongue".

Sylvester Stallone recreated himself when he returned to films after a long absence. Al Gore did that after he lost to Bush and recreated himself with his passionate film "The Inconvenient Truth" and won international fame and acclaim besides a Nobel.

The basic role of a director in today's board is to secure his company against financial and non-financial risks. The word SECURE is an acronym that spells out those risks – Social risk, Economic risk, Climate change risk, Unforeseeable risks, Reputational risks and Ethical risks. In order to do that they have to be trained in the architecture of change - Re-envisioning , Re-evaluating and Re-engaging.

The challenge lies in turning directors into leaders capable of reenergizing the future rather than clinging to reiterating the truths of the past. Their basic role turns to becoming leaders of change. They have to remember that whatever made the organisation successful in the past wont in future. In order to survive, their companies have to be "different" and not better.

We all know that whatever gets rewarded gets done. For this our reward system has to change. They have to use and reward five Ds -difference, dissent, diversity, dialogue and disclosure. These are the real value enhancers, the competitive differentiators, in the economy of change and surprise.

We are living and working in a world of multitrack, materiality, multifunctional, multinational, multitechnology and multicultural space. Your customers, your suppliers and even your employees are no longer unquestioningly loyal. You need intense engagement and incredible communication skills to create buy in at each stage. Leadership by telling and talking has to give way to leadership by acting and discussing, deliberating and debating and most of all living and becoming the change you seek in others. You have to turn your job into a cause, a passion that enthuses and excites and oozes out confidence that will make your staff do whatever you want them to do and whenever you want them to do. As Martin Luther King Jr said "If a man has not discovered some thing he would die

September 2008

Capital Markets as Instruments of Social Inclusion

We are living in one of the most inequitable world in history posing a palpable threat to global security. The richest 1100 own wealth, double of half the world's population. Our greatest challenge is to bridge this widening gap. Capital markets are the best human innovation and our only hope to achieve our goal of an equitable society. But like parachutes they can only function when open.

The current debacle of capital markets is fuelled by the greed of bankers, financiers institutions and the monied class. The shenanigans that followed the collapse of Bear Stearns showed crass behaviour of market manipulators that have spelt doom of the global free-market capitalism. This has made Sarbanes Oxley Act irrelevant. Far too many regulators with overlapping roles are competing with each other to deregulate the financial system in a race to the bottom.

The unique spectacle of impending recession coupled with rising inflation produced by one of the most reckless manipulations of capital markets with the connivance of regulators has catastrophic implications. Billions of dollars in shareholder value has been wiped away. Stunned Bear Stearns shareholders have seen their investments virtually wiped out overnight. The takeover deal with J P Morgan Chase offered \$2.4 a share compared with Bear's \$159 stock price in last April. Questions abound on the buyout. Shareholders, law makers and public at large want answers on how the deal was arranged, and gained government approval and financing, all in a few hours, and seemingly without alternative bidders being canvassed.

While irresponsible subprime lending in the US stock market has played havoc in the global markets, it is the derivatives, a fast growing category of contracts whose value is derived from the underlying value of bonds, stocks and currency futures which has shaken the public confidence in the rising stock market in India. According to a recent survey, Indian companies may have suffered \$5 billion mark to market losses due to subprime and derivative crises.

That all this should happen despite the draconian Sarbanes Oxley Act points to the abyss reached by the free-market capitalism which displays flagrant disregard of all norms of corporate governance practices and risk management standards which Sarbanes Oxley Act was supposed to uphold.

Insider trading on Wall Street is starting to look as troubling as it was in the time of Ivan Boesky in the 1980s, the head of enforcement at the US Securities and Exchange Commission warned recently. Linda Chatman Thomsen, the SEC's director of enforcement, said she had been "quite dismayed" at the nature of the commission's recent insider dealing actions.

The rules of the game in the financial markets are set up solely to benefit the financiers whether in London, New York or Hong Kong. Globalisation today appears to be run in the interest of big monied class which has western governments in its thrall. As Will Hutton says in Guardian: "Interpol should make arrests in New York, London, Tokyo, Beijing, Frankfurt and Paris, starting with all the executives in the credit-rating agencies who blithely ranked the debt as creditworthy in exchange for fat fees and freebies from the very

banks who were making the absurd loans. Governments should bring suits against the executives involved, the repository of vast personal wealth, to help repair the hole in private and public balance sheets.”

The problem is that all governments play hostage to the big financiers and are reluctant to regulate them despite warnings. It is naïve to suggest that self-regulation can work in the markets. In an interview to Wall Street Journal, Eliot Spitzer, the much defamed former Attorney General of New York, said: “The honour code among CEOs didn’t work. Board oversight didn’t work. Self-regulation was a failure”. Even a staunch defender of free capital markets as Joseph Ackerman, Chief Executive of Deutsche Bank says “ I no longer believe in the market’s self-healing powers.”

Markets became jittery only because following the subprime lending crisis nobody knew who had lost what. Market valuation of CDOs (Collateral Debt Obligations and CLOs (Collateralized Loan Obligations) are presumptive. The exposures are not objectively validated. Banks behind the subprime loans had sold the debt to other banks and specialized funds known as CLOs and hedge funds exposing them to billions of dollars of debt when mortgages defaulted.

We need to question the performance of the financial system against the time honoured principles of corporate governance of accountability, equity, integrity, transparency and responsibility. The crucial question in these financial failures is the lack of accountability. The system of compensation of bankers and operators in the financial system itself is flawed. According to Nouriel Roubini, Economics Professor at the New York University’s Stern Business School, the compensation system is a source of moral hazard in the form of gambling for redemption. He enumerates ten fundamental issues that led to the melt down.

One of the arguments in favor of this market discipline approach is that financial innovation is always one or more steps ahead of regulation; thus, one needs to design a regime that does not rely on rigid rules that would kill financial innovation. But experience has shown that markets cannot be relied upon in a world where bankers are improperly compensated, where agency problems lead to poor monitoring of lending, where a flawed transfer of credit risk to those least able to understand it and manage it occurred, and where regulatory arbitrage was widespread and rampant. It is because of this that even Paul Volker; a doyen of central bankers commends tighter regulation in the interest of the industry itself.

The current securitisation model is packed with greed, opacity and irresponsibility. It reduces the incentive for the originator of the claims to monitor the creditworthiness of the borrower. Every intermediary in the chain is interested only in its fee and eventually transfers the credit risk to those least able to understand it and bear it.

The mortgage broker, the home appraiser, the bank originating the mortgages and repackaging them into MBSs (Market Backed Securities), the investment bank repackaging the MBSs into CDOs, CDOs of CDOs and even CDO cubed, the credit rating agencies giving their AAA blessing to such toxic instruments: each of these intermediaries was earning income from charging fees for their step of the mortgage intermediation process and transferring the credit risk down the line to lay investors. In this maze of CDOs no one knew the level of risk at each stage.

There are fundamental accounting issues on how to value securities, especially in periods of market volatility and illiquidity when the fundamental long term value of the asset differs from its market price. The current “fair value” approach to valuation stresses the use of mark-to-market valuation where, as much as possible, market prices should be used to value assets, whether they are illiquid or not.

Financial markets have become less transparent and more opaque in many different dimensions. The development of news exotic and illiquid financial instruments that are hard to value and price; the development of increasingly complex derivative instruments; the fact that many of these instruments trade over the counter rather than in an exchange; the fact that there is little information and disclosure about such instruments and who is holding them; the fact that many new financial institutions are opaque and with little or no regulation (hedge funds, private equity, SIV and other off-balance sheet special purpose

vehicles) have all contributed to a lack of financial market transparency and increased opacity of such markets.

The absolute lack of supervision on the non-banking financial institutions like Bear Stearns and hedge funds has the real cause of the havoc. By their very nature the banks borrow in the short term and in liquid ways whereas they lend in the long term and in illiquid ways. There is therefore need for proper tab on their lending.

Finally in a world of financial mobility, mobile capital, instant transferability, globalization and financial intermediation, capital will always have a tendency to move to more lightly regulated shore. Reforms of financial regulation and supervision cannot be effectively carried out only at the national level. Indeed, the recent US debate on reforming capital markets was driven – before the current market turmoil – by the concerns that a tighter regulatory approach in the U.S. (say the Sarbanes-Oxley legislation) was leading to a competitive slippage of New York relative to London in the provision of financial services. There is therefore a need to encourage cross-national fora and develop a global financial monitoring system for stronger coordination to avoid a race to the bottom of financial regulation.

At the heart of the matter is whether the corporate governance infrastructure, built over the decades to provide checks and balances to ever more powerful chief executives, has been exposed as woefully inadequate by recent events. Where exactly were the boards & the independent directors of financial giants such as Citibank, Bear Stearn, Freddie Mac, Fanny Mae, Merrill Lynch, Lehman Brothers & Morgan Stanley etc when all this was happening? This is the question being increasingly asked by shareholders and employees and the public at large whose lives have been destroyed by these market manipulators. We are tasked today to find out the answers, not only for improving the quality of capital markets but also to ensure world security.

IOD is a revolution, a silent revolution that began 20 years ago with a conviction that if this silent revolution to reform the capital market does not succeed it will make a violent revolution inevitable.

***The above is the Presidential address delivered by Dr Madhav Mehra at the 19th IOD Foundation Day on 02 August 2008 in New Delhi**

Jan 2008

